

**READ
THIS
FIRST!**

COREL DRAW!

CorelDRAW! - Release 2.0

Thank you for purchasing CorelDRAW!

Your CorelDRAW 2.0 package includes the following items:

- Software Disks: either nine 5.25" 1.2 M disks
(Disks 1 to 4, ClipArt Libraries 1 to 5) *OR*
seven 3.5" 1.44 M disks (Disks 1 to 3, ClipArt Libraries 1 to 4)
- "CorelDRAW - A First Look" - Tutorial videotape
- CorelDRAW User's Manual
- CorelDRAW Technical Reference Guide
- Learning CorelDRAW! - Tutorial workbook
- CorelDRAW Symbol & Clipart Libraries Catalog
- WFN Type Guide (WFN BOSS & Corel Symbol/Typeface Export Filter)
- MOSAIC User's Guide
- CorelTRACE User's Guide
- Quick Reference Card
- Typeface Reference Chart
- Character Reference Chart
- Typographic Ruler
- Coupon Catalog
- CorelDRAW Addendum Sheet
- Registration Card

Please Register your Software NOW!!

It will only take a minute to complete your registration card. PLEASE DO IT NOW! As a registered user, you will receive COREL's regular newsletter as well as up-to-date information concerning the valuable purchase you have just made. These services are free, but if you don't register, we can't provide you with them. So please, take a moment and fill out the card and mail it to us. It will be well worth your time.

Where do I begin?

In order to help you learn CorelDRAW, we've included a number of learning materials, including a videotape and a tutorial workbook. The tape runs approximately an hour, and provides an excellent introduction to using the program. We recommend you watch the videotape first, then follow the exercises in the tutorial. Once you feel comfortable with the program's basic functions - experiment and have fun! You'll find the User's Manual, Technical Reference Guide and the various utility guides contain the detailed information you need if and when you run into difficulties.

Installation Procedure

Whether you are a new user of CorelDRAW or have received this package as an upgrade kit, please note that the installation procedure for both is essentially the same. Insert Disk #1 into drive A: or B:, whichever is appropriate for your machine or disk format. Type INSTALL and press ENTER to begin the installation. If you have a previous version of the program and follow all the default installation suggestions, this procedure will overwrite that version, provided it is in a subdirectory named CORELDRW. If you wish to keep the old version, simply enter a different name for the new program subdirectory, such as CORELDR2.

The installation procedure will modify your WIN.INI and PROGMAN.INI files, but the previous versions will be saved in two backup forms; one ending in a ".BAK" extension, the other ending in ".!&!". Please note also that in older versions of the program, the samples supplied were put into a subdirectory called CORELDRW\CDRFILES. This new version will install the samples in subdirectory called CORELDRW\SAMPLES, unless you specify a different name. Because of this, your old samples will **not** be disturbed by the installation procedure. You should delete duplicate files in order to conserve disk space. For further information on the installation procedure, refer to your CorelDRAW User's Manual.

New Features

This release of CorelDRAW is a major upgrade to the program's already powerful capabilities. For a complete listing of the new features, consult the Technical Reference Guide under both the *New Features* and *History of Program Changes - Version 2.0* sections.

Special Note: Windows 3.0 Operation

This version of CorelDRAW runs exclusively under Windows 3.0.

COREL Customer Services

Customer Service Group

Contact our **Customer Service Group** at 613-728-8200 (FAX: 613-761-9176) for help with the following:

- Software upgrade and update information
- Disk and documentation replacement information
- All non-technical questions and issues

Technical Support Hotline

COREL provides all registered software customers access to our Technical Support Hotline. If you require assistance with a technical matter, please refer to the CorelDRAW Technical Reference Guide for information on contacting our **Technical Support Group**.



COREL

COREL SYSTEMS CORPORATION

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Ottawa, Ontario K1Z 8R7

TEL: (613)728-8200

FAX: (613)728-9790

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The replacement of any diskette(s) not meeting COREL's "Limited Warranty" that is returned to COREL or an authorized representative with a copy of your receipt.

In no event will COREL be liable to you for any damages, including any lost profits, lost savings, or other incidental or consequential damages arising out of the use or inability to use such program, even if COREL representative has been advised of the possibility of such damages, or for any claim by any other party.

Some states and provinces do not allow the limitation or exclusion of liability for incidental or consequential damages, so the above limitation or exclusion may not apply to you.

General

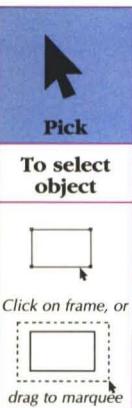
You may not sublicense, assign, or transfer the license or the program except as expressly provided in this Agreement. Any attempt otherwise to sublicense, assign, or transfer any of the rights, duties, or obligations hereunder is void.

This agreement will be governed by the laws of the State of Illinois in the United States, or Ontario in Canada.

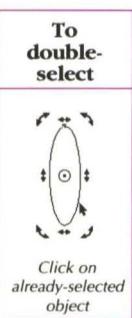
Should you have any questions concerning this agreement, you may contact **Corel Systems Corporation, 1600 Carling Avenue, Ottawa, Ontario K1Z 8R7**.



YOU ACKNOWLEDGE THAT YOU HAVE READ THIS AGREEMENT, UNDERSTAND IT, AND AGREE TO BE BOUND BY ITS TERMS AND CONDITIONS. YOU FURTHER AGREE THAT IT IS THE COMPLETE AND EXCLUSIVE STATEMENT OF THE AGREEMENT BETWEEN US THAT SUPERSEDES ANY PROPOSAL OR PRIOR AGREEMENT, ORAL OR WRITTEN, AND ANY OTHER COMMUNICATIONS BETWEEN US RELATING TO THE SUBJECT MATTER OF THIS AGREEMENT.



Once selected		Control	Shift	Control & Shift
Move				
Stretch		Constrains to vertical/horizontal Drag side black box 100% increments		
Scale		Drag corner black box 100% increments		



Once double-selected		Control
Rotate		Constrain to angle specified in Line & Curve Preferences
Skew		Drag curved corner arrow Drag straight skew arrow



		After converting to curves										
		Not applicable										
	<table border="1"> <tr> <td>Original</td> <td></td> </tr> <tr> <td>Character spacing</td> <td></td> </tr> <tr> <td>Word spacing</td> <td></td> </tr> <tr> <td>Line spacing</td> <td></td> </tr> <tr> <td>Move character</td> <td></td> </tr> </table>	Original		Character spacing		Word spacing		Line spacing		Move character		
Original												
Character spacing												
Word spacing												
Line spacing												
Move character												

CORELDRAW!

Keyboard Shortcuts

(SHIFT)



F1

F2

F3

F4

F5

F6

F7

F8

F9

F10

F11

F12

Split Preview



Menu Bar Shortcuts

FILE

CTRL-O = Open
CTRL-S = Save
CTRL-P = Print
CTRL-X = Exit

EDIT

ALT-BK SP = Undo
ALT-RET = Redo
CTRL-R = Repeat
SHFT-DEL = Cut
CTRL-INS = Copy
SHFT-INS = Paste
DELETE = Clear
CTRL-D = Duplicate
CTRL-T = Edit Text

TRANSFORM

CTRL-L = Move
CTRL-N = Rotate & Skew
CTRL-Q = Stretch & Mirror



EFFECTS

CTRL-B = Blend
CTRL-E = Extrude

ARRANGE

SHFT-PGUP = To Front
SHFT-PGDN = To Back
PGUP = Forward One
PGDN = Back One
CTRL-G = Group
CTRL-U = Ungroup
CTRL-C = Combine
CTRL-K = Break Apart
CTRL-V = Convert to Curves
CTRL-A = Align
CTRL-F = Fit Text/Path
CTRL-Z = Align to Baseline

DISPLAY

CTRL-Y = Snap to Grid
SHFT-F9 = Split Preview
F9 = Full-screen Preview
CTRL-W = Refresh Wire

SPECIAL

CTRL-J = Preferences

TAB Key = Selects objects consecutively

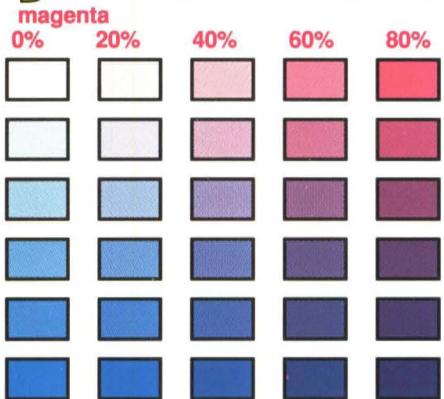
Shift-TAB = Selects objects in reverse order



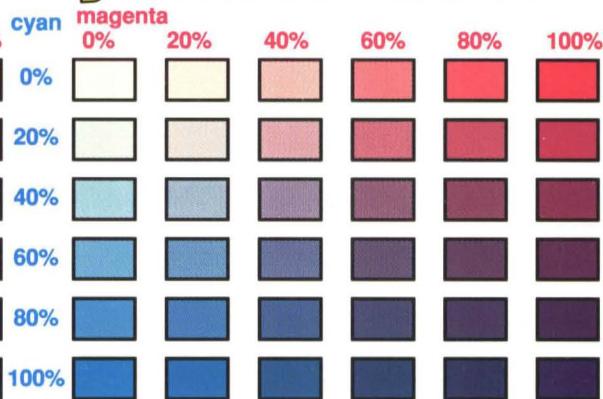
CORELDRAW! PROCESS COLOR CHART

All possible color combinations in 20% steps:
Columns=Magenta, Rows=Cyan, Groups=Yellow

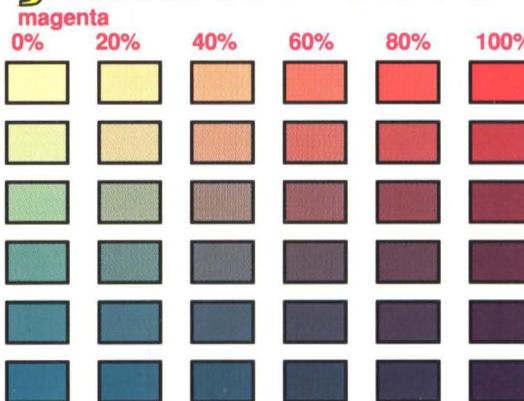
yellow=0%



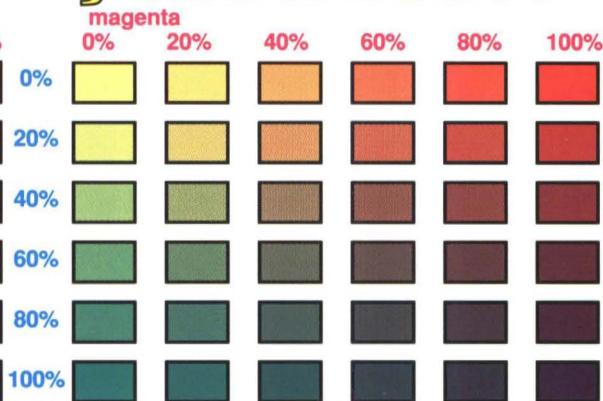
yellow=20%



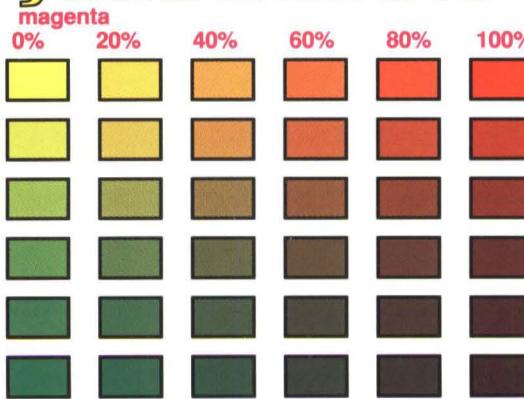
yellow=40%



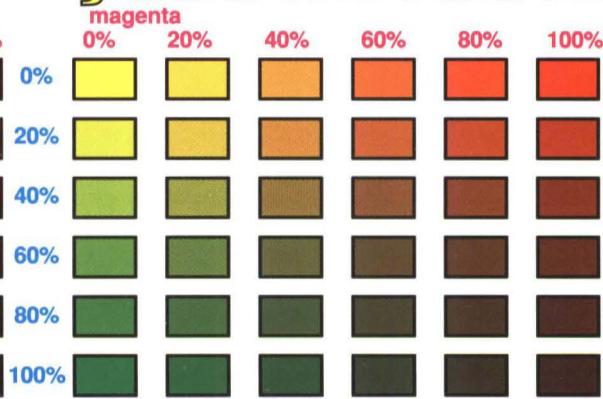
yellow=60%



yellow=80%



yellow=100%





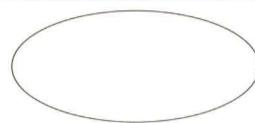
Zoom



Marquee select area to magnify

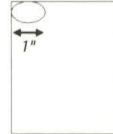


Selected area is magnified



Select to return to previous magnification

1:1



One inch on monitor equals one inch on printed page

**Displays all objects drawn,
no matter where they are
on the screen.****Full-page view.
Displays all objects on
printable page.**

Pencil

Freehand



Drag

Shift

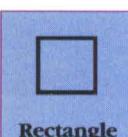


Continue to hold mouse button, backtrack to erase

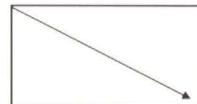
Bézier

Click to place node, drag to determine angle of curve,
click to place next node

Control

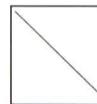
Limits angle of control point to multiples of setting in
Line & Curve Preferences (Default = 15°)

Rectangle



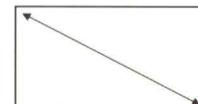
Drag = rectangle

Control

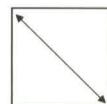
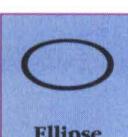


Control/Drag = square

Shift

Shift/Drag = rectangle from
center out

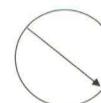
Control & Shift

Control/Shift/Drag = square from
center out

Ellipse



Drag = ellipse

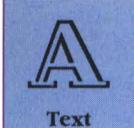


Control/Drag = circle

Shift/Drag = ellipse from
center outControl/Shift/Drag = circle from
center out

A

Text



Text	To create text		To create symbol text		Samples			
	1	Select A tool from Toolbox	1	Select A tool from Toolbox	ABC			
	2	Place cursor on page and click	2	Place cursor on page, hold Shift key and click	A B C			
	3	Use Text dialog box to specify the text to create	3	Select symbol from dialog box	A B C			
Paragraph Text	To create paragraph text					A B C		
	1	Select A tool from Toolbox					A B C	
	2	Drag to create the frame that will contain text					A B C	
	3	Use Text dialog box to specify the text to create, or to import text from the clipboard or from a word processor					A B C	

C

Outline



Outline flyout menu	Outline Width (points)	Custom widths (see below) None Hairline 1/2 pt 1 pt 2 pts 4 pts 8 pts 12 pts 16 pts 20 pts 24 pts							
	Outline Color (% black)	Custom colors (see below) White Black 10% 20% 30% 40% 50% 60% 70% 80% 90%							
	Custom outline widths	Dashes, dots, arrows, custom widths						Calligraphic pen outlines	
	Custom outline colors								
	Spot color outlines	Pantone colors							
	Process color outlines	CMYK (Cyan/Magenta/Yellow/Black)						RGB (Red/Green/Blue)	HSB (Hue/Saturation/Brightness)
	Custom fill colors	Named colors							

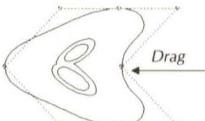
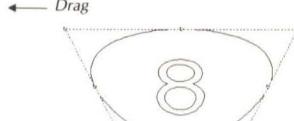
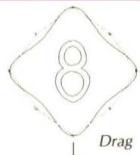
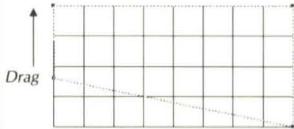
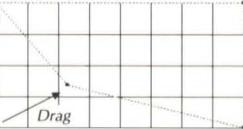
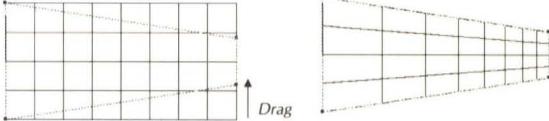
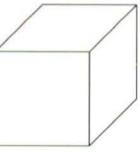
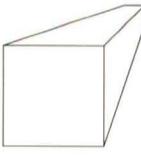
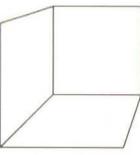
F

Fill



Fill flyout menu	Type of fills for objects	Custom colors (see below) No fill White Black Bitmap patterns Vector patterns Fountain fills PostScript fills						
	Shades of gray	10% 20% 30% 40% 50% 60% 70% 80%						
	Custom fill colors	Spot color fills	Pantone colors					
		Process color fills	CMYK (Cyan/Magenta/Yellow/Black)					
			RGB (Red/Green/Blue)					
			HSB (Hue/Saturation/Brightness)					
			Named colors					

Effects

	 Select object	 Click on Edit Envelope, then select Editing Mode	 Click on handle, then...	 drag in desired direction
Envelope	Control 	Shift 	Control & Shift 	
	 Select object then click on Edit Perspective	1-Point Perspective  Click on handle and drag horizontally or vertically	2-Point Perspective  Click on handle and drag diagonally toward center of object	
Perspective			Control & Shift 	
	 Select objects to be blended. Click on Blend command then enter number of Blend Steps		 To arrange shapes in an arc, double-click on selected objects, drag Center of Rotation, then Blend with angle of Rotation greater than 0	
Blend				
	 Select Object then click on Extrude command	 Parallel Extrusion	 Perspective Extrusion with Scaling Factor of 20	 Perspective Extrusion with Scaling Factor of 140
Extrude				

	COREL	Windows	Dixieland	Greek/Math	Musical	Geographic		COREL	Windows	Dixieland	Greek/Math	Musical	Geographic		COREL	Windows	Dixieland	Greek/Math	Musical	Geographic
0134	"	█	none	none	none	none		0184	„	„	③	÷	PPP	⊕	0223	ß	ß	→	↓	none
0135	‘	█	none	none	none	none		0185	none	‘	④	≠	PP	△	0224	à	à	→	◊	
0136	’	█	none	none	none	none		0186	„	„	⑤	≡	॥	■	0225	á	á	→	⟨	◦
0137	fi	█	none	none	none	none		0187	»	»	⑥	≈	⁹	●	0226	â	â	▼	®	◆
0138	fl	█	none	none	none	none		0188	none	1/4	⑦	…	o	▲	0227	ã	ã	➤	©	●
0139	†	█	none	none	none	none		0189	none	1/2	⑧	—	m	✉	0228	ä	ä	▶	TM	★
0140	‡	█	none	none	♪	none		0190	none	3/4	⑨	—	×	×	0229	å	å	◀	Σ	☆
0141	–	█	none	none	♪	none		0191	¿	¿	⑩	—	—	○	0230	æ	æ	◀	none	○
0142	•	█	none	none	none	none		0192	À	À	①	✗	x	✖	0231	ç	ç	▶	none	□
0143	ˇ	█	none	none	none	none		0193	Á	Á	②	✗	t	●	0232	è	è	▶	none	▼
0144	”	‘	none	none	none	none		0194	Â	Â	③	✗	r	□	0233	é	é	▶	none	■
0145	…	‘	none	none	none	none		0195	Ã	Ã	④	þ	su	✿	0234	ê	ê	◀	none	▶
0146	%	█	none	none	none	none		0196	Ä	Ä	⑤	⊗	ff	‰	0235	ë	ë	◀	none	▬
0147	™	█	none	none	none	none		0197	Å	Å	⑥	⊕	z	♪	0236	ì	ì	▶	none	fff
0148-0159:	unassigned							0198	Æ	Æ	⑦	∅	—	—	0237	í	í	▶	none	‘
0160	none	none	none	none	none	█		0199	Ҫ	Ҫ	⑧	○	—	→	0238	î	î	▶	none	○
0161	j	i	♪	♪	♪	█		0200	È	È	⑨	○	—	→	0239	ï	ï	▶	none	█
0162	¢	c	⋮	⋮	⋮	‘		0201	É	É	⑩	○	—	▲	0240	none	ð	none	none	■
0163	£	£	⋮	⋮	≤	‘		0202	Ê	Ê	①	≡	none	◆	0241	ñ	ñ	▶	none	...
0164	¤	¤	♥	♥	/	‘		0203	Ë	Ë	②	≡	none	■	0242	ò	ò	▷	none	◇
0165	¥	¥	♪	♪	∞	‘		0204	ି	ି	③	≡	none	■	0243	ó	ó	▶	none	×
0166			କ	କ	f	‘		0205	ି	ି	④	≡	none	■	0244	ô	ô	◀	none	+
0167	§	§	♣	♣	‘	‘		0206	ି	ି	⑤	≡	none	■	0245	ö	ö	▶	none	†
0168	”	”	♣	♦	♪	‘		0207	ି	ି	⑥	≡	•	●	0246	ö	ö	◀	none	•
0169	©	©	♦	♥	♪	▲		0208	none	Ð	⑦	∠	—	■	0247	œ	■	◀	none	◊
0170	¤	¤	♥	♠	2	■		0209	Ñ	Ñ	⑧	▽	▲	◀	0248	ø	ø	▶	none	
0171	«	«	♠	↔	none	★		0210	Ò	Ò	⑨	®		◀	0249	ù	ù	◀	none	
0172	¬	¬	①	←	△	□		0211	Ó	Ó	⑩	©		◀	0250	ú	ú	▶	none	○
0173	—	—	②	↑	□	█		0212	Ô	Ô	→	TM	✗	◀	0251	û	û	▶	none	✗
0174	®	®	③	→	.	+		0213	Ӯ	Ӯ	→	Π	none	◀	0252	ü	ü	▶	none	▼
0175	none	—	④	↓	‘	◊		0214	Ö	Ö	↔	√	□	◀	0253	ÿ	ÿ	▶	none	none
0176	°	°	⑤	○	‘	●		0215	Œ	■	↑	·	se	◀	0254	ÿ	ÿ	⇒	none	none
0177	none	±	⑥	±	△	□		0216	Ø	Ø	↗	—	none	◀	0255	ÿ	ÿ	none	none	none
0178	none	²	⑦	”	‘	କ		0217	Ù	Ù	→	^	tr	◀						
0179	none	³	⑧	≥	“	କ		0218	Ú	Ú	↗	∨	♪	◀						
0180	‘	‘	⑨	×	‘	କ		0219	Û	Û	→	↔	none	◀						
0181	none	μ	⑩	∞	~	କ		0220	Ü	Ü	→	⇒	×	◀						
0182	¶	¶	①	∂	none	କ		0221	none	Ý	→	↑	≡	◀						
0183	•	•	②	•	-	★		0222	none	Þ	→	=	⊕	◀						

COREL

COREL DRAW! CHARACTER REFERENCE CHART

CHARACTER SELECTION

Obtain desired character by holding down ALT key and typing numeric keypad numbers, including the preceding zero (0). Many of the characters are accessible directly by the keyboard.

"Windows" column shows what appears in the TEXT box (not necessarily displaying the actual character selected).

"COREL" column shows characters selected with normal fonts.

"Dixieland", *"Greek/Math"*, *"Musical"* and *"Geographic"* columns shows characters selected with these specialized fonts.

COREL	Windows	Dixieland	Greek/Math	Musical	Geographic
033	!	!	!	!	○
034	"	"	Α	//	Ⓐ
035	#	#	#	##	△
036	\$	\$	Ξ	ℳ	◊
037	%	%	Ξ	ℳ	○
038	&	&	⌚	⌚	★
039	,	,	⌚	⌚	⌚
040	((⌚	⌚	⌚
041))	⌚	⌚	⌚
042	*	*	⌚	⌚	⌚
043	+	+	⌚	⌚	⌚
044	,	,	⌚	⌚	⌚
045	-	-	⌚	⌚	⌚
046	.	.	⌚	⌚	⌚
047	/	/	⌚	⌚	⌚
048	0	0	⌚	⌚	⌚
049	1	1	⌚	⌚	⌚
050	2	2	⌚	⌚	⌚
051	3	3	⌚	⌚	⌚
052	4	4	⌚	⌚	⌚
053	5	5	⌚	⌚	⌚
054	6	6	⌚	⌚	⌚
055	7	7	⌚	⌚	⌚
056	8	8	⌚	⌚	⌚
057	9	9	⌚	⌚	⌚
058	:	:	⌚	⌚	⌚
059	:	:	⌚	⌚	⌚

COREL	Windows	Dixieland	Greek/Math	Musical	Geographic
<	<	❖	<	none	○
=	=	†	=	≡	¶
>	>	‡	>	≥	✗
?	?	⊕	?	≡	◻
@	@	⊗	≡	≡	✖
A	A	×	Α	Α	✖
B	B	⊕	Β	Β	✖
C	C	△	Γ	Γ	✖
D	D	◆	Δ	Δ	✖
E	E	◆	Ε	Ε	✖
F	F	◆	Φ	Φ	✖
G	G	◆	Γ	Γ	✖
H	H	★	Η	Η	✖
I	I	★	Ι	Ι	✖
J	J	★	Θ	Θ	✖
K	K	★	Κ	Κ	✖
L	L	★	Λ	Λ	✖
M	M	★	Μ	Μ	✖
N	N	★	Ν	Ν	✖
O	O	★	Ο	Ο	✖
P	P	★	Π	Π	✖
Q	Q	★	Ρ	Ρ	✖
R	R	★	Σ	Σ	✖
S	S	★	Τ	Τ	✖
T	T	★	Υ	Υ	✖
U	U	★	ζ	ζ	✖
V	V	★	Ω	Ω	✖
W	W	★	Ξ	Ξ	✖
X	X	★	Ψ	Ψ	✖
Y	Y	★	Ζ	Ζ	✖
Z	Z	[]	[]	[]	✖
[[\	\	\	✖
\	\]]]	✖
^	^	^	^	^	✖
_	_	_	_	_	✖

COREL	Windows	Dixieland	Greek/Math	Musical	Geographic
a	a	◆	α	♪	♂
b	b	●	β	♭	■
c	c	*	χ	♯	▲
d	d	*	δ	○	★
e	e	*	ε	♪	△
f	f	*	φ	♩	■
g	g	*	γ	♪	▲
h	h	*	η	♩	●
i	i	*	ι	♩	□
j	j	*	φ	♩	□
k	k	*	κ	♩	□
l	l	*	λ	♩	□
m	m	*	μ	♩	□
n	n	*	ν	♩	□
o	o	*	ο	♩	□
p	p	●	π	♩	□
q	q	○	θ	♩	□
r	r	■	ρ	♩	□
s	s	▲	σ	♩	□
t	t	▼	τ	♩	□
u	u	◆	υ	♩	□
v	v	♦	ω	♩	□
w	w	❖	ῳ	♩	□
x	x	▷	ψ	♩	□
y	y	❖	ϡ	♩	□
z	z	▬	ϗ	♩	□
{	{	▬	ϗ	♩	□
}	}	▬	ϗ	♩	□
-	-	▬	ϗ	♩	□
"	"	▬	ϗ	♩	□
~	~	▬	ϗ	♩	□
none	none	none	none	none	none
'	█	none	none	none	none
^	█	none	none	none	none
~	█	none	none	none	none
l	█	none	none	none	none
f	█	none	none	none	none
"	█	none	none	none	none

*An eight lesson tutorial
to get you started*

LEARNING

CORELDRAW!





LEARNING

CORELDRAW!

*An eight-lesson tutorial
to get you started*

COREL SYSTEMS CORPORATION, 1990

Learning CorelDRAW — Version 2.0

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How to use this book

Is this book for you?

If you are new to CorelDRAW, this book is for you. Its lessons will give you an overview of the program, and hands-on practice learning to use it.

This book *won't* make you a CorelDRAW expert. But it *will* get you started. It scratches the surface of CorelDRAW's many exciting and powerful features, and lets you try them for yourself. For detailed information about the features, refer to the *CorelDRAW User's Manual*.

Viewing the video

The video companion to this book, *CorelDRAW: A First Look*, demonstrates what you'll learn in the lessons and more. To get the most from the book, view the video first, then try the lessons.

Using the lessons

Each of the lessons in this book has an Introduction, an Overview, an Exercise and a Summary.

The **Introduction** tells you what you will learn in the lesson and why it's important.

The **Overview** tells you what you will *do* in the lesson.

The **Exercise** is divided into parts. It introduces features, explains how they work, and provides step-by-step instructions to get you started using them. It helps you learn by doing.

The **Summary** is a checklist of what you've learned. If you can check off the entire list, you're ready for the next lesson. If you can't, return to the Exercise and make sure you understand it before moving on.

Before you begin

Before you can begin the lessons, CorelDRAW must be installed on your computer. You'll find installation instructions in the *CorelDRAW User's Manual*.

You should also be somewhat familiar with Microsoft® Windows™, under which CorelDRAW runs. You should know how to open and close Windows applications, and how to use a mouse. For information about Windows, see the Basic Skills section of the *Microsoft Windows User's Guide*.

What's ahead?

As you work through the lessons, here's what you'll learn:

In Lesson 1, **Using the CorelDRAW screen**, you'll start CorelDRAW. And you'll learn your way around the screen where all CorelDRAW activities are performed.

In Lesson 2, **Drawing objects**, you'll draw rectangles, ellipses, lines and curves, create text, and learn how to trace bitmaps. These simple objects form the basis of even the most complex drawings.

In Lessons 3 and 4, **Transforming objects** and **Shaping objects**, you'll learn to move, modify and shape the objects you've drawn.

Lessons 5 and 6, **Outlining objects** and **Filling objects**, show you how to shape and color your objects' outlines, and how to fill their interiors with grays, colors and special effects.

Lesson 7, **Arranging objects**, teaches you to move objects in front of and behind one another, and to group, ungroup and align them.

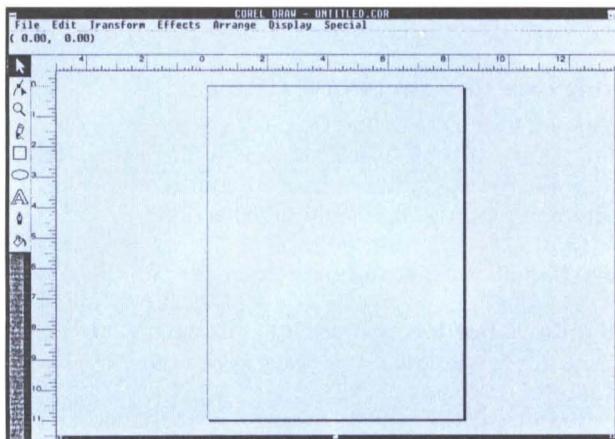
In Lesson 8, **Working with files**, you'll learn to save, import, export and print the files that contain drawings.

Finally, in **Where to now?**, you'll learn about features you'll want to move on to once you've mastered the basics.

1 Using the CorelDRAW screen

Introduction

When you start CorelDRAW, the screen where you perform all CorelDRAW activities is displayed on the monitor. It provides a work area, the tools and menu commands you need to create and modify graphics, and information to help you draw.



The screen where you perform all CorelDRAW activities.

Overview

In Lesson 1, you'll:

- Start CorelDRAW, and learn how to exit.
- Look over the CorelDRAW screen, and learn how to use each part of it.
- Learn how to change Page Setup and Display settings.

(a) Starting CorelDRAW

To begin, start CorelDRAW:

1. Turn on your computer.
2. Unless Windows loaded automatically when you started your computer, go to the Windows subdirectory and enter **WIN**
3. To start CorelDRAW, double-click on the CorelDRAW icon.

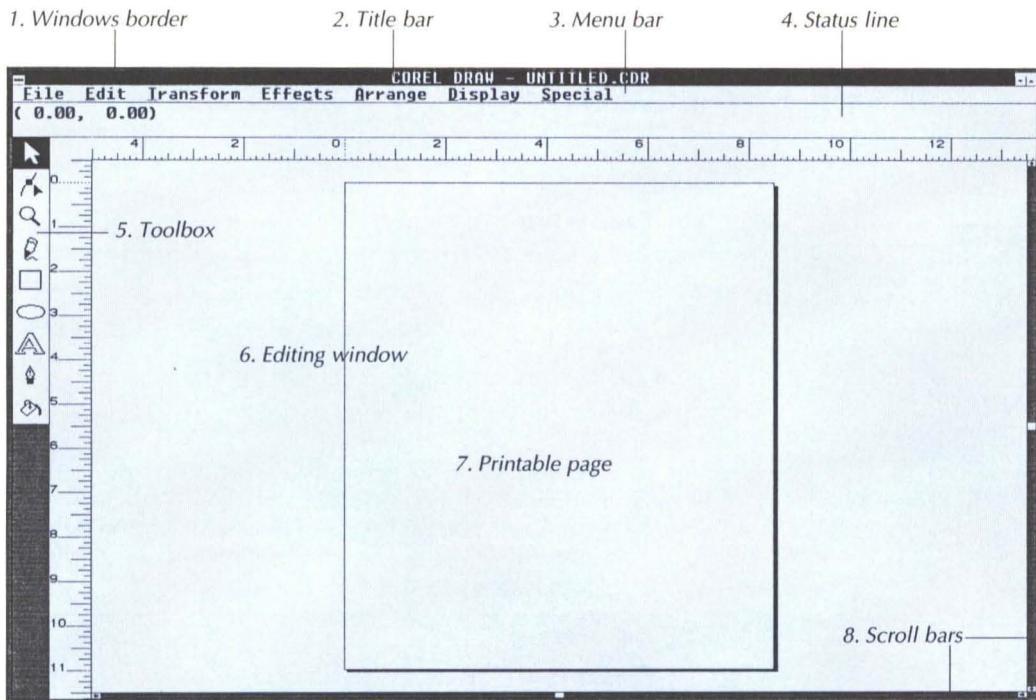
Don't do it now, but when you're ready to exit CorelDRAW, either hold down the Control (Ctrl) key and press X, or select Exit from the File menu.

(b) Looking over the CorelDRAW screen

If you've started CorelDRAW, the CorelDRAW screen is on the monitor. Don't worry if it isn't identical to the one on the next page. Someone might have changed your screen settings. In this lesson you'll learn how that's done.

From top to bottom, the parts of the screen are:

1. The **Windows border**. You use it to change the size of the CorelDRAW window if you want to run other applications beside it.
2. The **Title bar**. It displays the name of the program and of the file you're working in ('Untitled' for now).
3. The **Menu bar**. It displays the names of the seven drop-down menus you can access. Each offers a selection of features or commands. You'll use the File and Display menus in this lesson.
4. The **Status line**. It displays information about the graphics you draw or select.
5. The **Toolbox**. It displays icons of the nine tools used to draw, shape, outline, view and fill objects.
6. The **Editing window**. You can draw or place objects anywhere in this area.



The parts of the CorelDRAW screen.

7. The **Printable page**. Only objects inside this border will be printed.
8. Horizontal and Vertical **Scroll bars**. You use them to move the Editing window side to side or up and down.

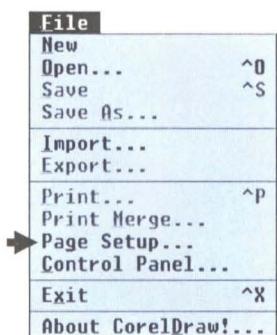
The screen also has features you can turn on and off. They might not be visible now, but you'll encounter some of them later. And you can find detailed information about all of them in the User's Manual. They include:

- A **Preview window**. It lets you see changes you've made to the outline and fill of objects.
- **Rulers and Crosshairs**. They're helpful when the exact size or placement of objects is important.
- **Grids and Guidelines**. They also help you size and place objects.
- A **Color palette**. It provides access to the colors used to outline and fill objects.

Exercise 1

(c) Changing Page Setup and Display settings

The appearance of the screen depends partly on settings you turn on and off in the File and Display menus. You can change the settings any time, to reflect how you want to use the screen.



Page Setup is a File menu selection.

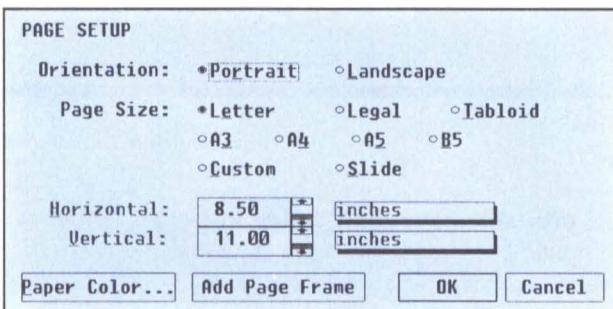
The Page Setup

Page Setup entries determine the orientation and size of your printable page.

1. To access Page Setup:

- Move the cursor to the Menu bar and click on File
- In the File menu, click on Page Setup.

You can see from the Page Setup dialog box that your orientation options are Portrait and Landscape. Your size options range from 1.00 by 1.00 inch to 17.00 by 17.00 inches.



Page Setup selections determine the orientation and size of your printable page.

2. To prepare for the lessons that follow, establish a Portrait orientation and a letter-sized page:

- Click on the radio button (the small circle) to the left of Portrait
- Click on the radio button to the left of Letter
- Click on the OK button.

If your page had a different orientation before, you'll notice a change in the printable page on the screen now.

The Display settings

Display settings determine a variety of screen characteristics. They're described in detail in the User's Manual, but we'll take a quick look at them now.

3. To access the Display menu, click on Display in the Menu bar.

Many Display settings can be turned on and off by clicking on them. Settings that are on, like Show Status Line and Show Color Palette here, have a check mark (✓) before them. Those turned off, like Show Rulers, have none.

The first group of selections establish a grid and guidelines on the screen; horizontal and vertical lines that can be useful when drawing and placing objects. You can choose to have objects snap into place on them or not.

The second group turns on and off the Rulers that are helpful when an object's size or location is important, the Status line which displays information about objects, and the Color Palette for filling and outlining objects. The third group turns the Preview Window on and off, displays or hides its Toolbox, and determines what is and isn't shown in the window.

The next-to-last selection determines whether or not bitmaps you've loaded are visible on the screen. (More about them in Lesson 2.) And the last can be used to refresh the screen after performing a procedure.

In the lessons ahead, it will be helpful if your Display settings have the same ✓ marks as those shown above.

4. If your settings don't match ours, change them:

- To add a ✓ or remove one from a setting, click on the setting. When you do, the menu disappears.
- Access the menu again and change the next setting, until all of them match ours. Then click anywhere in the editing window to leave the menu.

You're ready for the rest of the lessons. And you know where to look if you want to change settings or you need information about them.

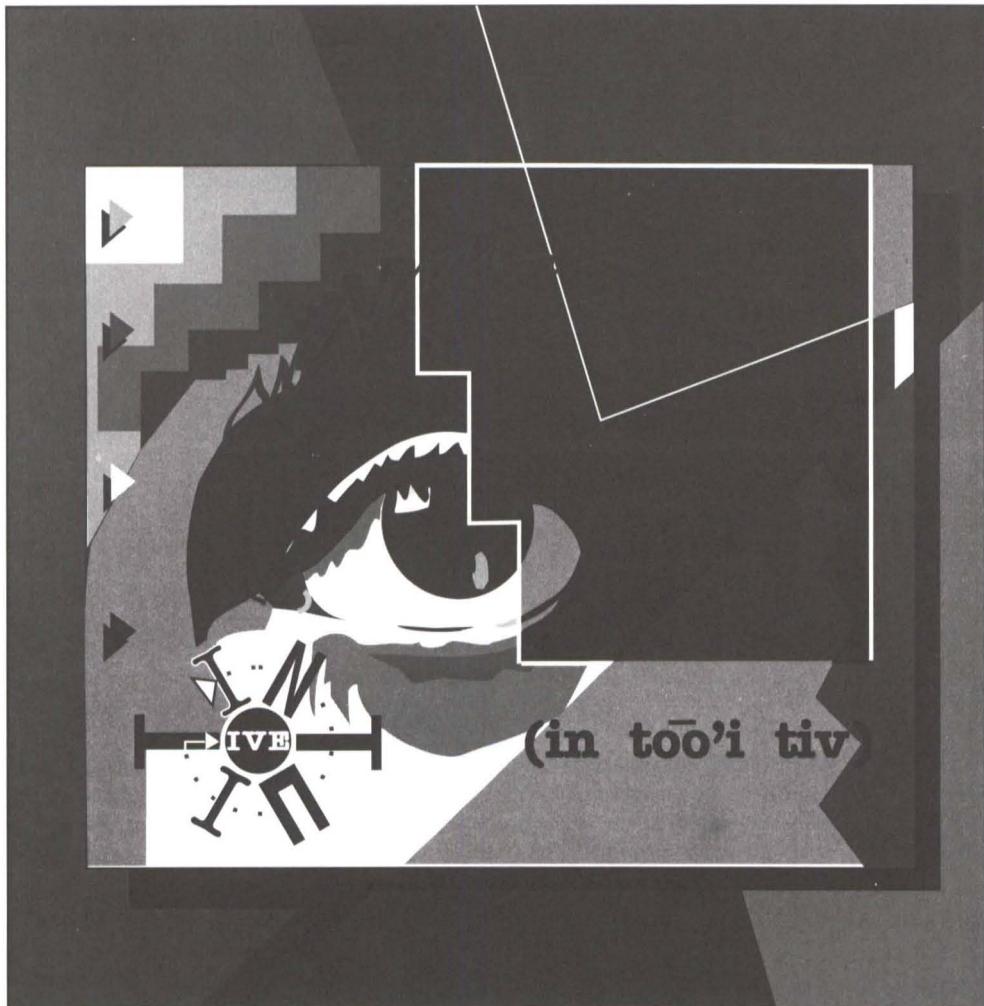


To prepare for the lessons ahead, make sure your Display settings match these.

Summary

In Lesson 1, you learned how to:

- Start and exit CorelDRAW.
- Use each part of the CorelDRAW screen.
- Change the screen's Page Setup and Display settings.



(in tōō'i tiv)

Created with CorelDRAW by Jeff Brice, Seattle, Washington, U.S.A.

2 Drawing objects (□ ○ ↴ ☰)

Introduction

When you create graphics with CorelDRAW, you begin by drawing objects. Even the most complex graphics start out with simple objects such as rectangles, ellipses, straight and curved lines, and text.



The four basic objects: rectangles, ellipses, lines and text.

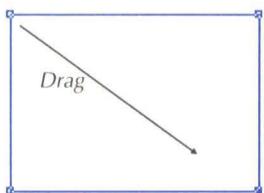
In this lesson, you'll use the Toolbox's four drawing tools to draw basic objects. You'll also learn about tracing bitmaps. In the process you'll display a new page when you need one, and you'll discover some of the information CorelDRAW displays in the Status line to help you with your drawings.

Overview

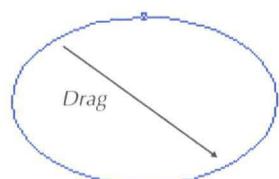
In Lesson 2, you'll:

- (a) Draw rectangles and ellipses using the □ and ○ tools.
- (b) Display a new page using the New selection on the File menu.
- (c) Draw straight lines using the ↴ tool.
- (d) Draw curves using the ↴ tool.
- (e) Learn how to set line and curve preferences using a selection in the Special menu.
- (f) Create and edit text using the ☰ tool.
- (g) Learn how you can trace bitmaps using Auto-Trace and CorelTRACE.

Exercise 2



To draw a rectangle, select the rectangle tool, then press the mouse button and drag.



To draw an ellipse, select the ellipse tool, then press the mouse button and drag.

(a) Drawing rectangles (\square) and ellipses (\bigcirc)

If you haven't started CorelDRAW, do it now using the instructions in Lesson 1. Then, to draw a rectangle:

1. First, click on \square in the Toolbox.

Notice that \square is highlighted in the Toolbox, and that your cursor has changed from \blacktriangleleft to $+$.

2. Next:

- Move the cursor to an open space in the screen
- Press and hold the mouse button
- Drag the cursor up or down and off to one side
- Release the mouse button.

You've drawn a rectangle. Repeat step 2 to draw another.

3. To draw an ellipse, follow the same procedure using the \bigcirc tool: click on \bigcirc , then repeat step 2.

You've drawn an ellipse. Draw another by repeating step 2 again.

As you drew, a dotted line indicated where the object would appear on the screen. The Status line displayed the cursor's location on the grid, and the object's name and size. This helps you draw objects exactly as you want them.

Drawing squares and circles

Squares are equal-sided rectangles. Circles are round ellipses. To draw squares and circles, you press and hold the Control (Ctrl) key while drawing with the \square or \bigcirc tools.

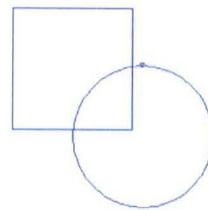
4. For example, to draw a square:

- Click on \square
- Press and hold the Control key
- Follow step 2
- Release the Control key.

The Control key constrains the rectangle to a square.

- To draw a circle:
 - Click on
 - Press and hold the Control key
 - Follow step 2
 - Release the Control key.

The Control key constrains the ellipse to a circle.



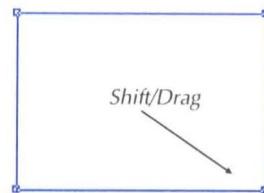
To constrain rectangles to squares and ellipses to circles, hold the Control key while dragging.

Drawing from the center out

You've drawn objects by dragging from a start to an end point. Using the Shift key you can draw from the center out.

- To draw a rectangle or ellipse from the center out:
 - Click on or
 - Press and hold the Shift key
 - Follow step 2
 - Release the Shift key.

Holding the Shift key while dragging draws objects from the center out.



To draw from the center out, hold the Shift key while dragging.

Drawing squares and circles from the center out

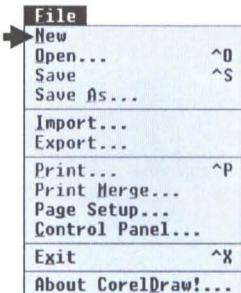
You can draw squares and circles from the center out by holding both the Control and Shift keys.

- To draw a square or circle from the center out:
 - Click on or
 - Press and hold both the Control and Shift keys
 - Follow step 2
 - Release the Control and Shift keys.

Holding both the Control and Shift keys while drawing constrains your drawing to a square or circle *and* draws it from the center out.

Before moving on, practice drawing rectangles and ellipses. Try dragging in different directions. Use the Control and Shift keys to constrain and draw from the center out. Notice that, when you've just drawn it, a rectangle has a small square in each corner, and an ellipse has one somewhere on its outline. You'll use these 'nodes' in Lesson 4, to shape objects.

Exercise 2



Use the New selection in the File menu to display a new page.

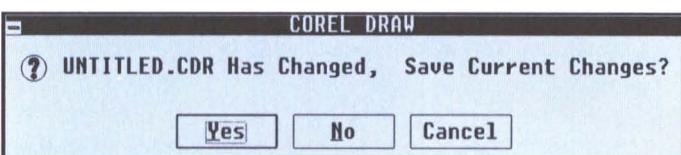
(b) Displaying a new page

If you completed part (a), your screen is covered with rectangles and squares, circles and ellipses. You'll want a fresh page for drawing lines.

1. To display a new page:

- In the Menu Bar, click on File
- In the File menu, click on New.

The message on your screen names the file you're in, tells you it has changed since you last saved it, asks if you want to save the changes, and gives you three options. You haven't given your file a name, so it's UNTITLED. Its suffix of .CDR indicates it's a CorelDRAW file.



2. You're just learning CorelDRAW, so there's no need to save what you've drawn. To start a new file without saving your objects, click on No.

In the lessons ahead, repeat this procedure any time you want a new page.

(c) Drawing straight lines (ℓ)

To start drawing a straight line:



To draw lines, use the Pencil (freehand drawing) tool.

1. In the Toolbox, click on the ℓ tool.

2. CorelDRAW provides two modes for line drawing: Freehand and Bézier. We'll use Freehand, so if the message in the Status line is already **Drawing**, proceed to step 3. If the message in your Status line is **Drawing in Bézier mode**, then:

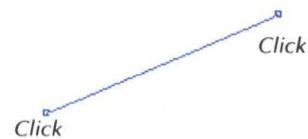
- In the menu bar, select Special
- From the Special menu, select Preferences
- In the Preferences dialog box select Lines & Curves
- In the Lines & Curves dialog box, select Freehand
- Click on OK in each of the dialog boxes to leave the menu.

3. Place the cursor where you want the line to start, and click.

When you move your cursor now, a line forms between the starting point and the cursor. You can move the cursor anywhere on the screen to see the line that would result if you clicked there.

4. To end your line, place the cursor where you want the line to end, and click.

You've drawn a straight line. To draw another, repeat steps 3 and 4.

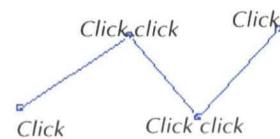


To draw a line, click to start, click to finish.

Drawing multiple-segment lines

5. To draw a line with many segments:

- Place the cursor where you want the line to start, and click
- Place the cursor where you want the line segment to end and the next to start, and double-click. Repeat this for each segment except the last.
- For the last segment, place the cursor where you want the line to end, and click once.



A multiple-segment line.

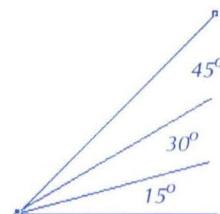
You've drawn a multiple-segment line.

Constraining the angle of a line

Just as the Control key constrains rectangles and ellipses to squares and circles, it constrains the angle of straight lines to multiples of the angle you specify, with the default being fifteen degrees.

6. To constrain the angle of a straight line:

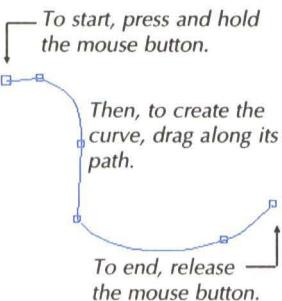
- Press and hold the Control key
- Place the cursor where you want the line to start, and click
- Move the cursor in a circle around the start point, and notice that it jumps in fifteen degree steps
- Place the cursor where you want the line to end, and click
- Release the Control key.



To constrain the angle of a line to multiples of 15 degrees, hold Control while drawing.

Practice drawing straight lines until you're comfortable with them. Then move on to curves.

Exercise 2



To draw a curve in Freehand mode, drag along its path.

(d) Drawing curves (ℓ)

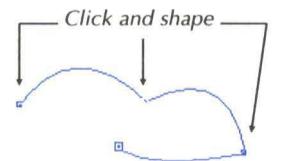
You're still in Freehand mode, with the ℓ tool selected.

1. To draw a curve in Freehand mode:

- Place the cursor where you want the curve to start
- Press and hold the mouse button
- Drag the cursor along the path of the curve
- At the end of the curve, release the mouse button.

There was a fraction-of-a-second wait while CorelDRAW determined exactly where to place the curve. The result is a Bézier curve; a mathematical curve that CorelDRAW creates in Freehand Draw mode as well as Bézier mode.

Draw more curves in Freehand mode. Notice after you've drawn one that it has a node at each end, and at least one in between. If you want to try erasing while drawing, hold the Shift key while you draw, then backtrack along your curve to erase as much of it as you want.



To draw a curve in Bézier mode, click where you want a node, shape the curve as described in the User's Manual, then click for the next node.

Drawing in Bézier mode

To draw curves in Bézier mode, you must understand the concept of shaping. It isn't discussed until Lesson 4, so we won't actually draw in Bézier mode right now. Briefly though, instead of dragging to draw a curve, you:

- Click where you want the first node in the curve
- Drag the node's control points to determine the height and shape of the curve leading to the next node
- Click to place the next node
- Repeat the procedure for each node.

Both Draw and Bézier modes have advantages. You'll come to prefer one or the other, depending on the graphic you're creating. For now, before moving on, spend some time drawing curves in Freehand Draw mode only. (If you just can't wait to draw in Bézier mode, consult the User's Manual.)

(e) Setting line and curve preferences

When you're working with lines and curves, you sometimes want to be very precise, sometimes not so precise. For example, you might want the ends of two lines to be near one another without joining, or you might want them to join even if you don't start the second line exactly where the first ends.

Using Line and Curve Preferences you can specify how precise you want to be. The preferences are described in detail in the User's Manual. But let's take a quick look at them now so you'll know where they are when you need them.

1. To access the Lines & Curves dialog box:

- In the Menu Bar, click on Special
- In the Special menu, click on Preferences
- In the Preferences dialog box, click on Lines & Curves.

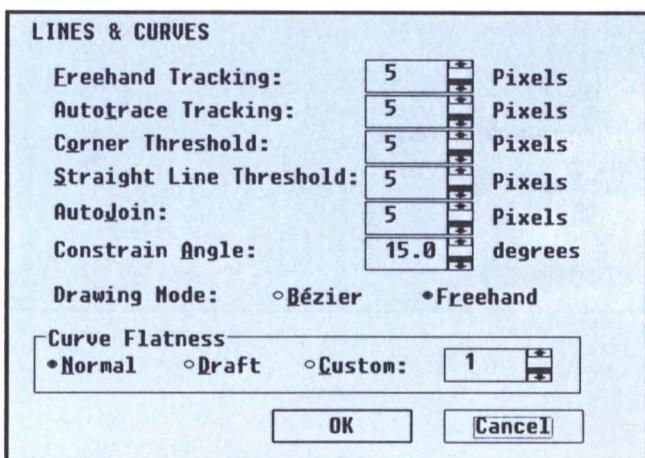
Most of the settings here are in pixels, the standard measure of distance on a computer screen.

They can vary from 1 to 10. The lower the setting, the more precisely CorelDRAW interprets the movement of the cursor. The higher the setting, the more it allows for minor variations, smoothing out what you draw. You can also

change the constrain angle used when you draw straight lines while holding the Control key, and set the Drawing Mode to Bézier or Freehand.

2. When you've looked over the selections, exit the Special menu by clicking on Cancel in the Lines & Curves dialog box, then on Cancel in the Preferences dialog box.

Next you'll learn how to create and edit text.



Line & Curve settings help you get the results you want. Each of them is described in detail in the CorelDRAW User's Manual.

Exercise 2

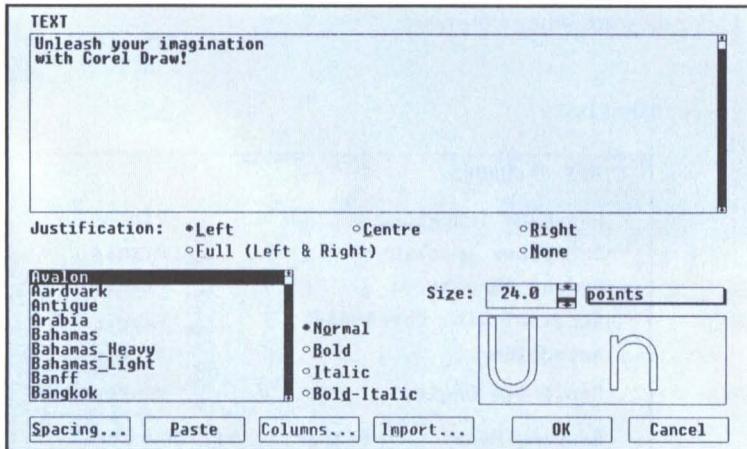
(f) Creating and editing text (A)

The last object you'll create in this lesson is text. To begin:

1. Activate the text tool by clicking on A in the Toolbox.

The A tool is highlighted, and the cursor has changed from ↲ to +.

2. Move the cursor to indicate where you want to begin the text, and click.



You use the Text dialog box to create and edit text.

and to specify how many columns you want. And it provides Paste and Import options for loading text from the clipboard or other programs.

The sample characters you see displayed in the screen are in the currently selected typeface.

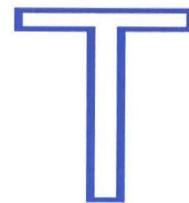
3. To change the typeface (and the appearance of the sample characters) click on a typeface other than the one highlighted.

Repeat step 3 until you find a typeface that appeals to you. (Try Brooklyn for something conservative, and Frankenstein or Paradise for something a little wilder.)

The Text dialog box provides an Entry Window for typing up to 250 characters of text, settings to justify or center it, a wide variety of typefaces, and settings for the style (normal, bold, and so on) and size of text.

It also provides buttons for accessing the dialog boxes used to change the spacing between characters and lines,

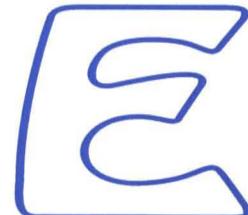
4. Next:
 - Set the Style to Normal and the Size to 24 points
 - Move the cursor into the Text Entry window, and click.
5. Key in a few words. Your name for example, or COREL DRAW, or some letters and numbers. Then click on OK.



Editing text

Your text is there, with its typeface and size displayed in the Status line. But at 24 points it isn't very large on the screen.

6. To increase its size:
 - Click on Edit in the Menu Bar, then on Edit Text in the Edit menu. (Or, as a shortcut, hold the Control key and press the letter T.)
 - Click on the up arrow to the right of the Size box until the size is about 100 points. (Or, click to the right of the actual value, back space to erase it, then type 100.)
 - Click on OK.



Now that the text is larger, you can see a node between each character, like the ones on the objects you drew earlier. You'll use these later, to change character spacing and attributes.



You changed only the point size when you edited your text, but you could have changed any of the other settings in the Text dialog box. And you could have deleted or added text by inserting the cursor, backspacing to erase, and typing to add.



Using the  tool you can also create 'paragraph text', importing up to four thousand characters from a word processor.

Practice creating text for a while. Then, when you're comfortable with what you've learned, move on to find out about another way you can create objects in CorelDRAW.

CorelDRAW provides a wide variety of typefaces in just about any point size.

(g) Tracing bitmaps

This section describes another way you can create curved objects in CorelDRAW, by tracing bitmaps. Bitmaps are graphics created pixel by pixel instead of using vectors as CorelDRAW does. You'll eventually want to try tracing one. For now though, there's no hands-on work involved. So if you skip this section you'll still be able to complete the lessons that follow.

Why trace bitmaps?

If you've tried sketching with a mouse or digitizing tablet, then you know that a pen and paper are faster and more accurate. And if you've printed bitmaps on a low-resolution printer, or even printed enlarged bitmaps on a high-resolution printer, then you know the frustration of jagged outlines where you want smooth ones.

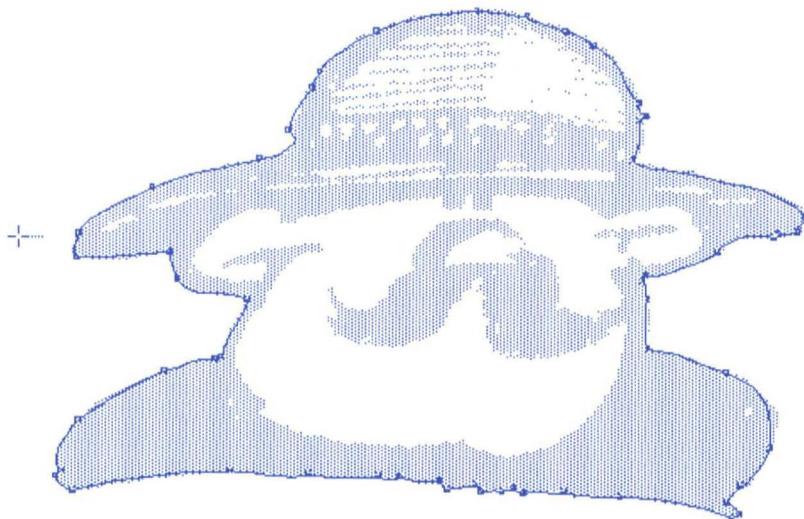
With CorelDRAW you can overcome these limitations by tracing bitmaps. Your tracing is a smooth vector line drawing like those created using the tools you're already familiar with. The result is a sketch you can edit using all of CorelDRAW's powerful capabilities; one that retains its resolution when printed at any size on any printer.

Your tracing options

CorelDRAW provides two methods for tracing bitmaps:

- Auto-Tracing with the *L* tool, as described in the *CorelDRAW User's Manual*
- Tracing with CorelTRACE, a program that comes with CorelDRAW along with its own *Guide to Operation*.

CorelTRACE was designed to replace Auto-Trace, and is more powerful. But we've kept Auto-Trace in Version 2.0 of CorelDRAW because it's effective for simple bitmaps, it can be used within CorelDRAW while CorelTRACE is a separate program, and because those already familiar with Auto-Trace might want to keep using it. For tracing complex bitmaps though, we recommend you use CorelTRACE.



You can create curved objects by tracing bitmaps, using either Auto-Trace or CorelTRACE.

How it's done

Here's the process you typically follow to create vector objects by tracing bitmaps using Auto-Trace:

- You import the bitmap — a scanned image of a pen and paper sketch, or an already existing bitmap file — into CorelDRAW.
- You then trace the bitmapped object using Auto-Trace, as described in the User's Manual.
- You modify your tracing any way you want; changing its outline, filling its interior, adding to, removing from or shaping the tracing until you've achieved the desired result.
- Finally, you save your traced sketch as a new file, which you can print like any other CorelDRAW file.

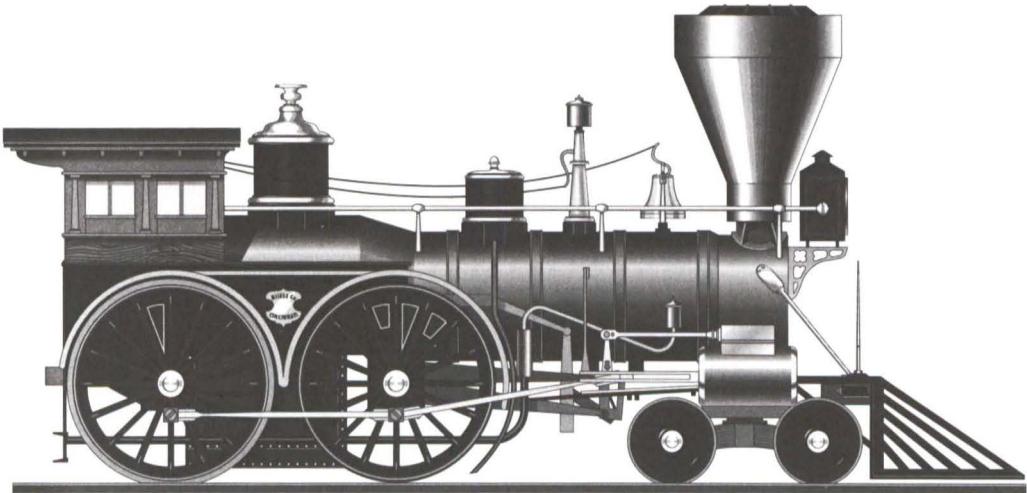
If you're using CorelTRACE, the bitmap is traced automatically, and the resulting file can be imported into CorelDRAW for modification.

You now know how to draw the four basic objects in CorelDRAW. And you know where to look when you want to trace bitmaps. In the next lesson you'll learn how to transform objects that you've drawn.

Summary

In Lesson 2, you learned how to:

- Draw rectangles and ellipses using the and tools.
- Draw straight lines using the tool.
- Draw curves using the tool.
- Set line and curve preferences in the Special menu.
- Create and edit text using the tool.
- Trace bitmaps using Auto-Trace or CorelTRACE.



Steam Engine 440

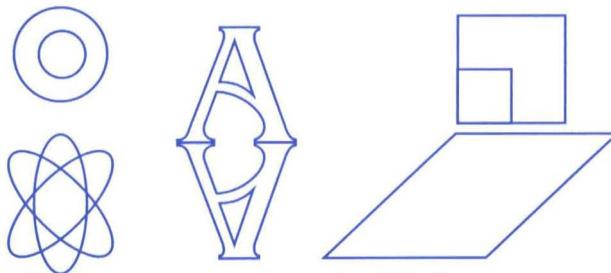
Created with CorelDRAW by Douglas Gennetton, Greeley, Colorado, U.S.A.

3

Transforming objects (→)

Introduction

Drawing objects is just the start. Once they're drawn, you usually want to modify them; to move and transform them to achieve the results you're after.



You usually want to transform the objects you've drawn, to achieve the results you're after.

In this lesson you'll use the Pick tool (→), and its Transform menu alternatives, to select, move and transform objects. You'll also learn how to undo a procedure, repeat transformations, and clear them from an object.

Overview



You perform transformations using the Pick tool.

In Lesson 3, you'll use the → tool to:

- (a) Select objects.
- (b) Move objects.
- (c) Stretch objects, and undo a stretch.
- (d) Scale objects.
- (e) Rotate objects.
- (f) Skew objects.
- (g) Repeat and clear transformations.

Exercise 3

(a) Selecting objects

The first step when transforming an object is to select it. To learn selecting you'll need objects. So if you haven't already, start CorelDRAW, get a new page, and:

1. Draw an ellipse, then a rectangle.

Selecting and deselecting an object

You use the tool to select objects. There's a shortcut for activating and selecting the last object you've drawn:

2. To select your rectangle using the shortcut, press the Space Bar once.

Pressing the Space Bar changes the cursor to and selects the last object drawn. You know your rectangle is selected because of the black box at each corner and on each side. The Status Line displays the object's type, size and location.

3. To change back to , press the Space Bar again.

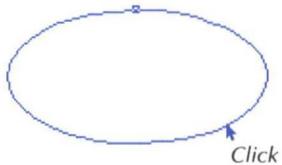
Move your cursor and you'll notice it has changed from to , ready to draw another rectangle. The Space Bar is a toggle. Press it repeatedly and you change back and forth between and the most recently used drawing tool. So it's easy to draw an object, select and transform it, then draw another of the same type.

4. To select your ellipse:

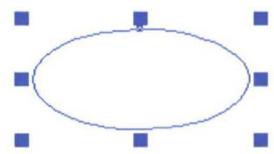
- Either click on in the toolbox, or press the Space Bar until the cursor shape is
- Place the cursor on the outline of the ellipse, and click.

Now your ellipse has black boxes around it and your rectangle doesn't. You've *deselected* the rectangle and selected the ellipse. Unlike programs where you click inside an object to select it, with CorelDRAW you always click on the outline. That way, when you're working with many objects in a small space, it's easier to select the object you want.

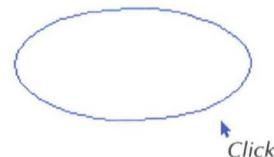
5. To deselect the ellipse without selecting another object, click on any open space.



To select an object, click on its outline with the tool.



When you do, the object is surrounded with eight black boxes.



To deselect the object, click on any open space.

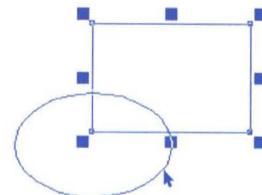
Selecting multiple objects

6. To select both your objects using ↩:
 - Click on the first object's outline
 - Press and hold the Shift key
 - Click on the second object's outline
 - Release the Shift key.

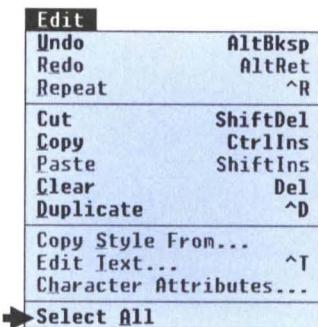
Holding the Shift key, you can use ↩ to select as many objects as you want. You can also select all your objects using the Edit menu:

7. First, to deselect your objects, click on open space. Then, to select *all* your objects:
 - In the Menu bar, click on Edit
 - In the Edit menu, click on Select All.

With only two objects to select, you could just as easily have used the Shift key. But when you're working with many objects you'll find Select All handy.



To select multiple objects, hold the Shift key while selecting.



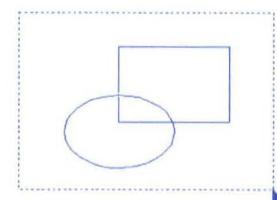
To select all your objects, use Select All.

Marquee select

You can also select one or more objects with the marquee select.

8. First, to deselect your objects, click on open space. Then, to marquee select your rectangle and ellipse:
 - Place the cursor above or below, and to one side of your objects
 - Press and hold the mouse button
 - Drag until a dotted line fully encloses both objects
 - Release the mouse button.

Both objects are selected.



You can also select one or more objects using marquee select.

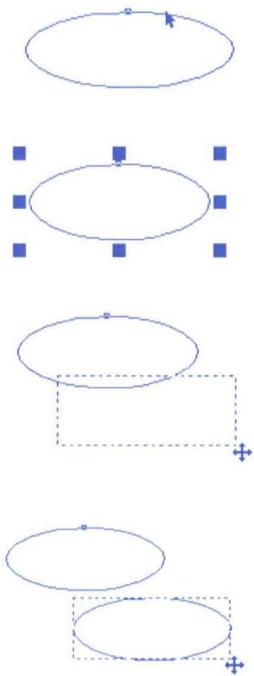
Practice selecting objects by clicking on them and by marquee selecting them. So far you've focused on rectangles and ellipses. But all objects are selected in the same way. So try creating lines, curves and text, and selecting them.

Next you'll learn how to move selected objects.

Exercise 3

b. Moving objects

Once you've selected an object, you can move it using either the  tool or a Transform menu selection.



To move an object, select it, then hold down the mouse button and drag the object.

Using to move an object

1. To select and move one of your objects, first click on open space to make sure no objects are selected. Then:
 - Place the cursor anywhere on an object's outline
 - Press and hold the mouse button
 - Drag to move the object anywhere on the screen
 - Release the mouse button.

When you press and hold the mouse button you select the object. As you drag, the object's outline is replaced by a dotted line. When you stop dragging, but are still holding the mouse button, the object reappears, so you know where it will be placed when you release the button. As you move the object, information about it, and about how far you've moved it, is displayed in the Status Line. Repeat step 1 with another object, and notice these changes as they occur.

2. To move several objects at once:

- Select two or more objects
- Repeat step 1 for any of the selected objects.

Multiple selected objects all move when you move one of them.

Using the Transform menu to move an object

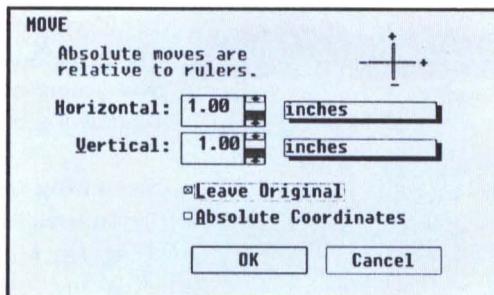
You can also move objects using the Move selection on the Transform menu. You can specify how far you want an object moved by entering Horizontal and Vertical distances. You can also specify where on the page you want an object placed, entering coordinates for the object's center or for any of the black boxes that surround it when it's selected. For example, to move an object up an inch and to the right an inch:

3. First, to access the Move dialog box shown at the top of the next page:

- Select the object you want to move
- In the Menu bar, click on Transform
- In the Transform menu, click on Move.

4. To move the object, in the Move dialog box:

- If there is an X in the Absolute Coordinates button, click on it to turn Absolute Coordinates off
- If there is no X in the Leave Original button, click on it to turn Leave Original on
- In both the Horizontal and Vertical boxes enter 1.00 inch
- Click on OK.



The Move dialog box provides alternatives to moving manually.

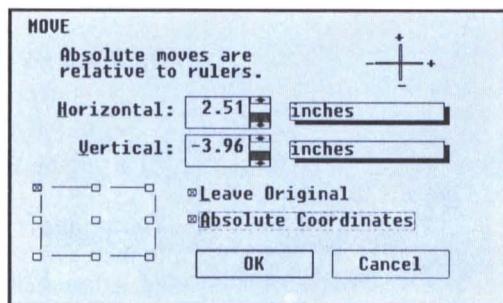
A copy of your object has been placed exactly an inch above and to the right of the original. And, because you specified you wanted it left in place, the original remains where it was.

To move an object using coordinates instead of distance, you click on the Absolute Coordinates button so it contains an X. Nine additional buttons appear; one for each of the black boxes around the object, and one for the object's center. Click on any of them and the coordinates of the object's corresponding black box are displayed in the Horizontal and Vertical fields. You can change the coordinates to specify exactly where you want that point of the object placed.

Move a few more objects, including lines and text, using the tool. Try holding the Control key to see how it constrains the movement to vertical and horizontal.

If you want to, try using the Move dialog box to move some objects. If you have trouble figuring out how it works, refer to the User's Manual for help. You might also want to try the Nudge feature, to make minor adjustments to objects' locations using your keyboard's arrow keys. It, too, is described in the User's Manual.

Now that you know how to select and move objects, you'll learn how to stretch them.

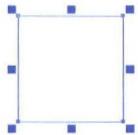


Using the Move box's Absolute Coordinates option, you can specify exactly where to place an object's center or any of the black boxes that surround the object when it's selected.

Exercise 3

(c) Stretching objects

The black boxes around a selected object are for stretching and scaling it. To learn stretching we'll use a square, so begin by drawing one.



To stretch an object, drag any of the four black boxes at the object's sides.

Stretching manually

1. To stretch the square:

- Use ↩ to select it
- Place the cursor on any of the four stretch boxes along the sides (not at the corners), until ↩ becomes +
- Press and hold the mouse button, drag away from the square, then release the mouse button.

Dragging a box at the side of an object stretches it, changing its size and aspect ratio. Changing the aspect ratio converted your square into an ordinary rectangle.

Undoing an action

2. To get your square back, undo the stretch:

- In the Menu bar, click on Edit
- In the Edit menu, click on Undo.

You've undone your most recent action; in this case a stretch. In the exercises ahead, use Undo any time you want to undo an action and try it again.

Two-way stretching and constraining

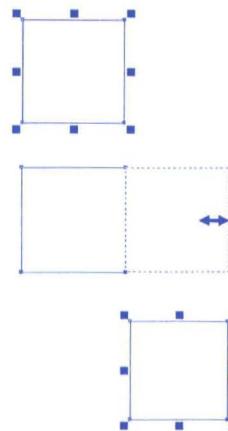
To stretch in two directions, you hold the Shift key while stretching. To limit the size of the stretch to multiples of the original size, you hold the Control key.

3. To stretch in two directions, repeat step 1 holding the Shift key down while dragging. Be sure to release the mouse button before the Shift key. When you've finished, undo your action.
4. To constrain a stretch, repeat step 1 holding the Control key down. Again, undo your action.
5. Try holding both Control and Shift while stretching, to discover for yourself what effect this has.

Mirroring an object

Mirroring is stretching an object across itself, usually using the Control key to ensure symmetry.

- To mirror your square, repeat step 1, but instead of dragging away from the square, drag across it to the other side. Try it with and without the Control key.



Leaving the original

When stretching an object, you can use the numeric keypad's + character to leave the original in place along with the stretched object.

- To mirror your square and leave the original:

- Select the square
- Place the cursor on one of the side black boxes, press and hold the mouse button, and drag across the square to its other side
- While still holding the mouse button, tap the numeric keypad's + key, then press and hold the Control key
- Release the mouse button, then the Control key.

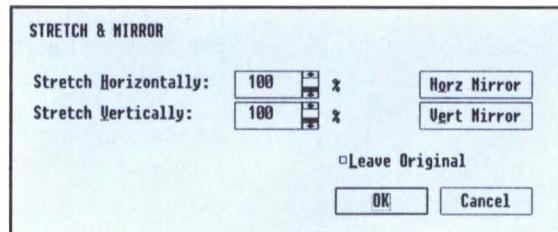
To mirror an object, stretch it across itself.

Stretching with the Transform menu

If you know the exact amount by which you want to stretch or mirror an object, you might want to do it using the Stretch and Mirror selection on the Transform menu.

- To display the Stretch and Mirror dialog box:

- Select an object
- In the Menu bar, click on Transform
- In the Transform menu, click on Stretch & Mirror.



You can use this box to perform stretch and mirror operations similar to those you did manually.

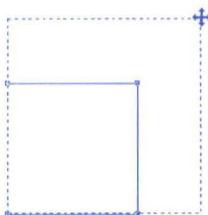
You can also stretch and mirror using this dialog box.

- For now though, exit the dialog box by clicking on Cancel, practice stretching with a variety of objects, then move on to scaling.

Exercise 3

(d) Scaling objects

You stretched objects, changing their size and aspect ratio, using the side stretch/scale boxes. You scale objects, changing their size but not their aspect ratio, using the corner boxes.

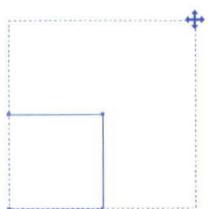


To scale an object, drag one of its corner boxes.

1. If you don't already have one, draw a square and select it. Then, to scale the square:

- Place the cursor on any of the four scaling boxes at the corners (not the sides) of the square, until becomes
- Press and hold the mouse button, drag away from the square or into its center, then release the mouse button.

Your square, although bigger or smaller than before, is still a square. Scaling altered its size but not its aspect.



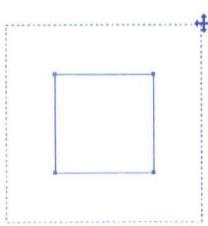
To constrain the scale, hold Control while dragging.

Four-way scaling and constraining

When you stretched objects holding the Shift key, you stretched in two directions. When you stretched holding the Control key, you stretched in multiples of the object's size. And when you stretched holding both the Shift and Control keys, you stretched in two directions and in multiples of the object's size.

Scaling works similarly. When you scale holding Shift, you stretch in four directions. When you scale holding Control, you scale in multiples of the original object's size. And when you scale holding Shift and Control, you scale in four directions and in multiples of the object's size. To see this for yourself:

2. Scale an object while holding the Shift key. Be sure to release the mouse button before you release Shift.
3. Scale an object while holding the Control key. Again, be sure to release the mouse button, then the Control key.
4. Scale an object while holding both the Shift and Control keys.



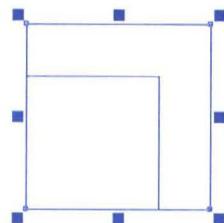
To scale from the center out and constrain at the same time, use Shift and Control.

Leaving the original

You also use the + key in the numeric keypad the same way when scaling as when stretching, to leave the original object in addition to scaling it.

5. To scale an object and leave the original:

- Draw any object
- Select the object
- Place the cursor on any of the corner black boxes, press and hold the mouse button, and drag to scale the object
- Press + in the numeric keyboard to leave the original
- Release the mouse button.

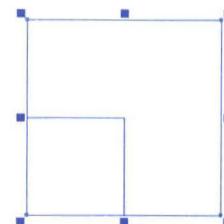


To leave the original, press + in the numeric keypad.

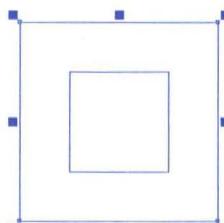
Again, you can also leave the original while scaling using either or both of the Shift and Control keys. Shift scales from the center out, while Control constrains the scale to multiples of the original object's size.

6. To scale an object using both Shift and Control, and leave the original:

- Draw any object and select it
- Place the cursor on any of the corner black boxes, press and hold the mouse button, and drag to scale the object
- Without releasing the mouse button, tap the numeric keypad's + key, then press and hold both the Shift and Control keys
- Release the mouse button, then the Shift and Control keys.



To leave the original and constrain at the same time, use + and the Control key.



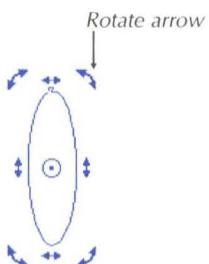
To leave the original, constrain the scale, and scale from the center out, use +, the Control key and the Shift key.

Stretching and scaling is trickier than some of the tasks you've performed. So before moving on, practice your technique using the instructions in steps (c) and (d). When you're comfortable with stretching and scaling, you're ready to rotate and skew objects.

Exercise 3

(e) Rotating objects

You stretched and scaled selected objects using the black stretch/scale boxes around them. To rotate and skew objects, you use the rotate/skew arrows that replace the stretch/scale boxes when you select already selected objects.



In rotate/skew mode, arrows replace the stretch/scale boxes.

1. To get started, on a new page draw any object. In the example we'll use an ellipse.

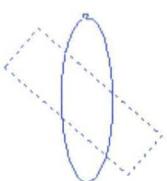
2. To activate rotate/skew mode:

- Click on ↗ to select the ellipse
- Place the cursor on the outline of the ellipse and click again.

You know you're in rotate/skew mode because the stretch/scale boxes have been replaced by double-headed rotate/skew arrows.

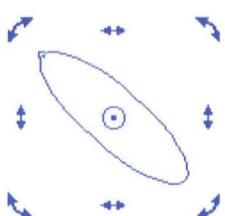
3. To rotate the ellipse:

- Place the cursor on a *curved* rotate arrow at one of the corners (not a straight skew arrow along one of the sides) until ↗ becomes ↘
- Press and hold the mouse button, drag around the ellipse until you've rotated it as much as you want, then release the mouse button.



As you rotated, the angle of rotation was displayed in the Status Line, along with the cursor coordinates.

4. Create another object, text for example, and repeat step 3 to rotate it. This time use the + key to leave the original, the way you did when stretching and skewing in part (d) of this exercise.



To rotate, drag one of the curved corner arrows.

By now you know the Control key constrains your actions in different ways. It constrains the angle of rotation to multiples of fifteen degrees.

5. To rotate in fifteen degree increments, repeat step 3, but hold the Control key while rotating. You can start holding the Control key at any time during the rotation. But remember to release it only *after* you've released the mouse button.

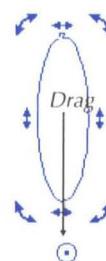
Changing the center of rotation

When you double-clicked on an object, in addition to the rotate/skew arrows around it there was a bulls-eye at its center. When you rotate, the rotation takes place around this center. To change the center, simply drag it.

6. To rotate around a different center:

- Draw an object and double-select it
- Place the cursor on the center of rotation until it becomes $+$
- Press and hold the mouse button, drag the center anywhere you like, then release the mouse button
- To rotate the object around its new center of rotation, perform step 3.

To return the center of rotation to its original location, simply deselect the object.



To change the center of rotation, drag it. To return it to its original location, deselect the object.

Using the Rotate and Skew dialog box

In addition to manual rotation, you can rotate objects using the Rotate and Skew dialog box.

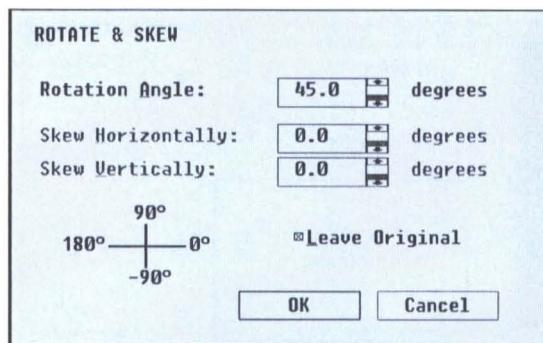
7. To access the dialog box:

- In the Menu bar, click on Transform
- In the Transform menu, click on Rotate and Skew.

Using this box you specify the angle of rotation you want, and whether or not you want to retain the original in addition to creating a rotated duplicate.

Before moving on to the next section, exit the dialog box and practice rotating a variety of objects manually. If you want to, try using the Rotate and Skew dialog box too. Its operation is more or less self-explanatory. And you know where to find help if you need it.

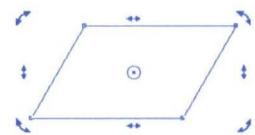
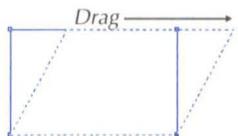
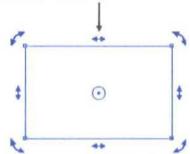
When you're ready, move on to find out how to skew objects.



You can also rotate objects using this dialog box.

Exercise 3

Skew arrow



To skew an object, drag one of the straight skew arrows along its sides.

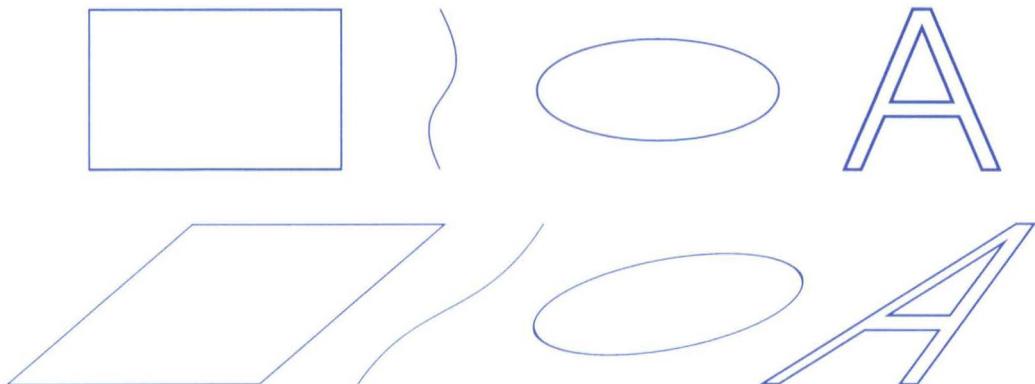
(f) Skewing objects

To rotate objects, you used the curved arrows at the corners of double-selected objects. To skew objects, you use the straight arrows along their sides.

1. To begin, draw a rectangle (or any other object) and double-select it to display the rotate/skew arrows.
2. To skew the rectangle:
 - Place the cursor on a *straight* skew arrow on one of the sides (not a curved rotate arrow at a corner), until becomes
 - Press and hold the mouse button, drag in the direction of one of the two skew arrows until you've skewed the rectangle as much as you want, then release the mouse button.

As you can see, skewing changes the object's perspective.

3. To get some practice, skew a few other objects, including text. To do it, first create the objects, then repeat step 2. Remember you can undo a skew just as you can any other action, using the Undo command in the Edit menu.



As these before (above) and after (below) examples show, skewing an object changes its perspective.

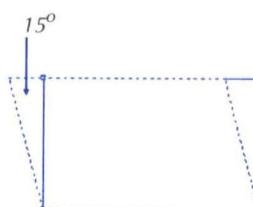
Constraining a skew and leaving the original

When you skew objects, the Control and + keys work the same way they do with rotation:

- As a default, Control constrains a skew to fifteen-degree increments. You can change the angle using Line & Curve Preferences.
- The + key in the numeric keypad leaves the original.

3. To skew an object and leave the original:

- Place the cursor on a skew arrow on one of the sides until ↗ becomes +
- Press and hold the mouse button, drag in the direction of one of the skew arrows until you've skewed the rectangle as much as you want
- Press + in the numeric keypad
- Release the mouse button.



To constrain the angle of the skew to multiples of 15°, use Control.

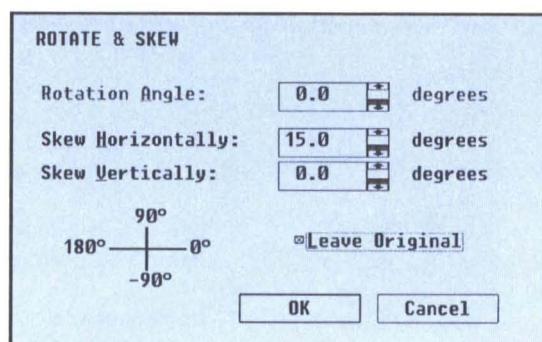


To leave the original when skewing, use +.

Using the Rotate & Skew dialog box

You've already learned you can rotate an object using the Rotate and Skew dialog box in the Transform menu. You can use the same box to skew an object, specifying the horizontal and vertical amounts by which you want it skewed.

Practice skewing objects manually. If you want to try skewing with the Rotate and Skew dialog box, go ahead. Otherwise, when you feel confident that you know how to skew objects, move on to find out how to repeat transformations you've applied to an object, and how to clear them.



You can also skew objects using this dialog box.

Exercise 3

(g) Repeating and clearing transformations

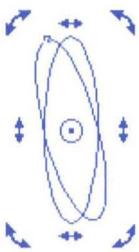
Once you've performed a transformation on an object, you can easily repeat it using Repeat in the Edit menu, or clear it using Clear Transformations in the Transform menu.

Repeating a transformation

To try out the repeat feature:

1. Draw an object (we've used an ellipse), then rotate it 15 degrees while leaving the original.
2. In the Edit menu, select Repeat.

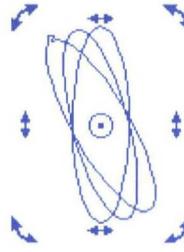
You now have three objects: the original, the one you rotated and copied manually, and the one you rotated and copied using the Repeat command.



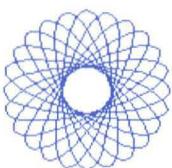
First, perform a transformation
manually ...



... then select Repeat from the
Edit menu ...



... to have CorelDRAW perform
the transformation again
automatically.



Our original rotation repeated
eleven times.

3. To repeat the transformation again using a shortcut, hold down the Control key and press the letter R.

You can use Repeat as many times as you want, to repeat the action you performed most recently; in this case a rotation.

4. Repeat your transformation any number of times, by holding Control and pressing R each time. In the example to the left, we repeated the original rotation until we had twelve ellipses.

Clearing a transformation

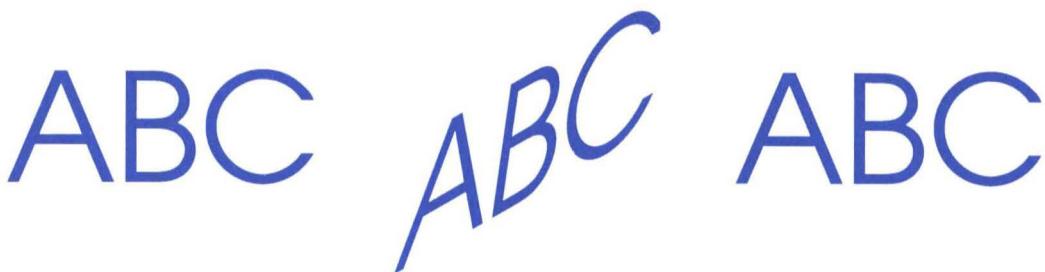
To try out the clear feature:

1. Draw an object (we've used text).
2. Rotate it 15 degrees.
3. Skew the object by any amount.
4. To clear the transformations, in the Transform menu click on Clear Transformations.

Clear Transformations clears all the transformations that you performed on the object, in this case a rotation and a skew, leaving the untransformed original.



To undo all of the transformations performed on an object, select Clear Transformations from the Transform menu.



You can create an object ...

... then transform it ...

... then use Clear Transformations to return to the original object.

You now know the basics of applying transformations to an object and repeating and clearing them. You might want to practice these actions for a while before moving on.

To practice, and to consolidate what you've learned, draw a variety of objects and move, stretch, scale, rotate and skew them. Try repeating transformations and clearing them as well, until you feel comfortable with transformations. In the next lesson you'll learn how to shape objects.

Summary

In Lesson 3, you learned how to:

- Select objects.
- Move objects.
- Stretch objects, and undo transformations.
- Scale objects.
- Rotate objects.
- Skew objects.
- Repeat and clear transformations.



Circum Navegaciones
Created with CorelDRAW by Meaulnes Legler, Zurich, Switzerland

4

Shaping () and zooming ()

Introduction

When you drew and transformed objects we pointed out small squares called nodes along their outlines. Now you'll use those nodes, and the shape tool (, to shape objects. The A comparison of objects before and after being shaped. The top row shows a blue square, a blue circle, and the letters 'ABC'. The bottom row shows the same objects after being edited: the square has rounded corners, the circle is flattened at the top and bottom, and the letters 'ABC' have been converted into a stylized, rounded font where each letter is composed of multiple segments and nodes.

Objects before shaping (above) and after (below).

Overview



To shape objects, edit their nodes with the shape tool.

In Lesson 4, you'll:

- Shape rectangles and ellipses using the  tool.
- Shape curves using the 

Lesson 4 Shaping (

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Exercise 4

(a) Shaping rectangles and ellipses

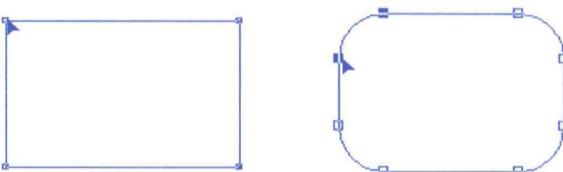
A rectangle has a node in each corner. An ellipse has a single node along its outline. Using the  tool you can round the corners of rectangles, and create arcs and wedges from ellipses.

1. To get started, draw a rectangle and two ellipses.

Rounding a rectangle

2. To shape your rectangle:

- Select  from the Toolbox, and notice that the cursor changes from  to 
- Select the rectangle by clicking on it with 
- Place  on any node, press and hold the mouse button, and drag the node along the outline of the rectangle as far as it will go
- Release the mouse button.



To round the corners of a rectangle, drag any of the rectangle's nodes along its outline.

When you selected the node, it changed from hollow to black. When you dragged it, each of the rectangle's nodes split in two, and all of the nodes moved along the outline of the rectangle, rounding its corners.

The nodes moved until the ones along the shorter sides of the rectangle met. The amount of rounding (the corner radius) is displayed in the Status Line.

That's all there is to shaping a rectangle.

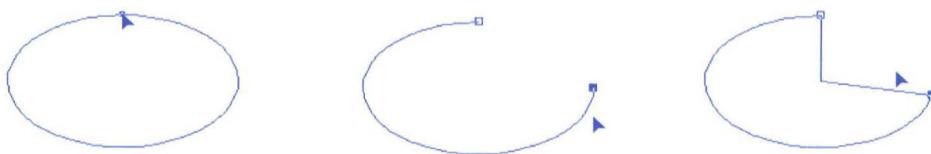
Creating an arc

3. To create an arc:
 - Select an ellipse with ►
 - Place ► on the ellipse's node, press and hold the mouse button, and drag in a circle *outside* the outline of the ellipse
 - Release the mouse button.

When you dragged, the node split in two, with one node at each end of an arc. The shape and size of the arc changed as you dragged. The location of the nodes was displayed in degrees in the Status Line. And the total angle created between the nodes was also displayed.

Creating a wedge

4. To create a wedge, repeat step 3 with your second ellipse. But instead of dragging outside the outline of the ellipse, drag *inside* it.



To create an arc, drag an ellipse's node outside the ellipse. To create a wedge, drag it inside the ellipse.

5. Practice rounding the corners of rectangles and creating arcs and wedges from ellipses. When shaping ellipses, try using the Control key to constrain the angle of an arc or wedge to multiples of fifteen degrees.
6. Create a number of ellipses, dragging in different directions with the ○ tool to see the effect this has on the location of the ellipse's node.

When you're satisfied you know how to shape rectangles and ellipses, you're ready for the bigger challenge of shaping curves. But first, because it's often helpful to magnify nodes when you're shaping curves, we'll look at the Q tool.

Exercise 4

(b) Zooming in and out on objects (Q)

When working with a drawing, you sometimes want to magnify several objects, a single object, or even part of an object. The Q tool lets you do that, by zooming in and out on objects.

You should still have some objects left on your screen from part (b). If you don't, draw one or two now. Then:



The Q tool flyout menu.

1. To access the zoom flyout menu from the Toolbox, click on the Q tool.

As you can see, the menu has five selections.

2. To zoom in on an object:

- In the flyout menu, click on Q
- Move your cursor, which has changed to Q, above or below and to one side of an object, press the mouse button, then drag until a dotted line completely encloses your object
- Release the mouse button.

Your object now takes up most of the screen.

3. To zoom in even more, repeat steps 1-2, but in step 2 enclose only part of your object in the dotted line.

Now a portion of your object is even larger.

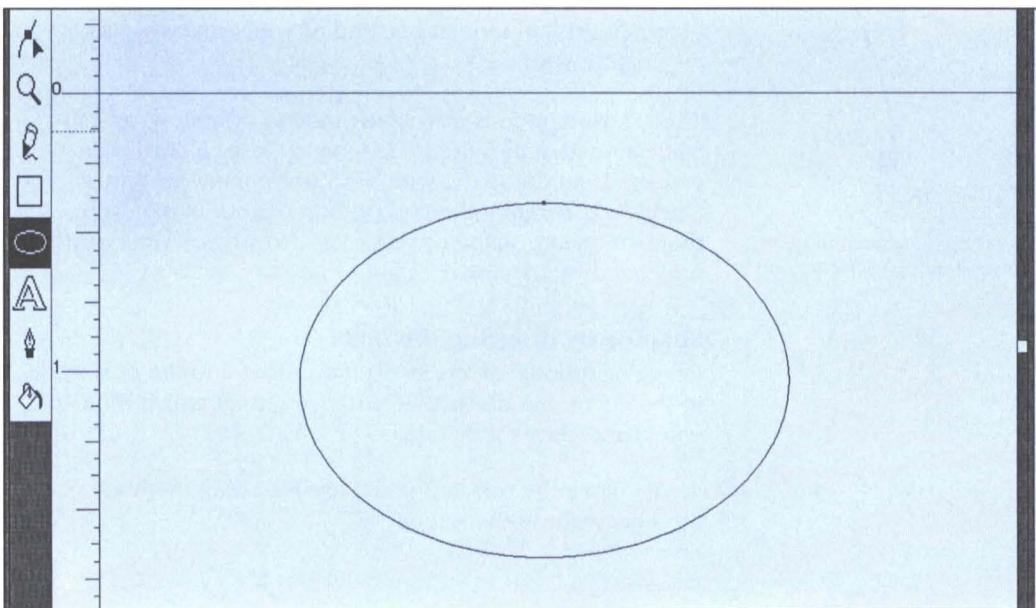
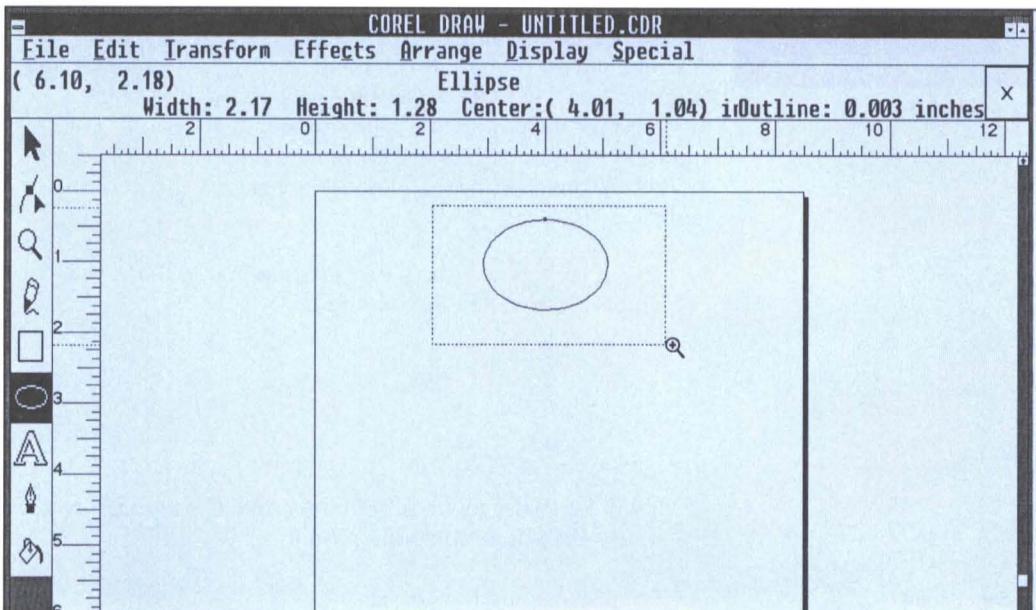
4. Next, access the Q menu again, and click on Q.

The Q selection zooms out one size.

5. To display only the part of the window that contains objects, access the Q menu and click on the Q selection.
6. To return to your original full-page view, access the Q menu and select Q.

The other Q selection, 1:1, displays objects as close as possible to the size they'll be on your printed page.

7. When you've finished exploring the Q tool, you're ready to start shaping curves. So select New from the File menu to display a fresh page.



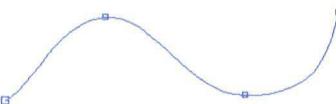
To zoom in on an object, select from the flyout menu,
then drag to outline the area you want enlarged.

Exercise 4

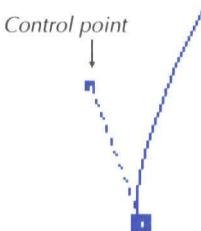
(c) Shaping curves

Shaping curves is more involved than shaping rectangles and ellipses. For one thing, curves have up to three different node types, including cusp, smooth and symmetrical. For another, each node has at least one, and usually two, control points. To shape curves you drag their nodes and control points.

1. To get started, use the tool in Draw mode to draw a simple S curve like the one below.



2. It will be easier to work with the curve if you magnify it, so use the tool to zoom in on it.
3. To start shaping the curve:
 - Select from the Toolbox, so the cursor becomes .
 - Select the node at one end of your curve by clicking on it with the .



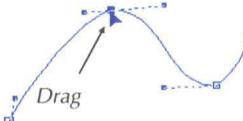
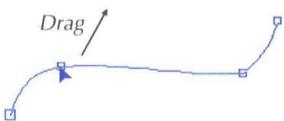
At least one control point extends from a selected node.

The selected node is now black instead of hollow, and the Status line identifies the node type as Cusp. A small arm extends from the node, with a control point at its end. (If you can't see it, magnify the end portion of your curve even more.) You can shape the curve in two ways: by moving the node, and by moving the control point.

Shaping by dragging the node

Dragging a node affects its position relative to the next node in the curve, but doesn't affect the angles at which the curve enters and leaves the node.

4. To move the selected node, use to drag the node anywhere on the screen.



The same curve before and after dragging one of its nodes.

Shaping by dragging a control point

Moving the control point *does* affect the angle at which the curve enters or leaves the node.

5. To shape your curve using the control point:

- If it isn't already selected, use ► to select the end node. The control point for this node and for the node at the other end of the curve segment will appear.
- Place ► on the control point at the end of the dotted line extending from the node, press and hold the mouse button, and drag the control point. To get a feel for it, move the control point in and out along its axis. Also move it freely in a circle around the node and observe the effect on the shape of the curve. Then select and move the control point at the other end of the first curve segment to see how moving it alters the curve shape.

As you've seen, moving the control point determines the angle at which the curve leaves the node, changing the curve's shape.

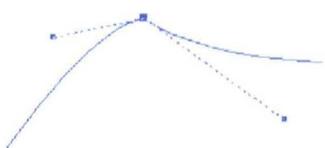
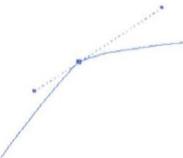
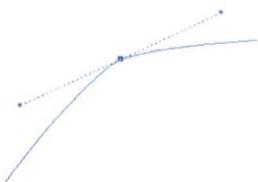


Dragging a node's control point changes the angle at which the curve leaves the node.

The end nodes of a curve are always cusp nodes, and always have a single control point. Practice shaping curves using their end points, zooming in and out as required using the Q tool. Next you'll learn how to shape curves using the other types of nodes.

Smooth and symmetrical nodes

The other types of curve nodes are smooth and symmetrical. Their differences are outlined in the User's Manual. Briefly though, unlike cusp nodes their control points always lie in a straight line. And the control points of symmetrical nodes are always equidistant from the node.

*A cusp node.**A smooth node.**A symmetrical node.*

6. When learning node editing, there's no substitute for experimenting on your own. To see for yourself the differences between the types of nodes, draw a few curves, making some smooth and some not so smooth. Then click on various nodes, check the Status line to see what type they are, and practice using them to shape the curve.

Adding a node

When shaping a curve, you sometimes want to add additional nodes.

7. To add a node:
 - Place ► at a point on a curve where you want to add the node, then double-click to access the Node Edit menu
 - From the Node Edit menu, select Add.
8. Try shaping the curve using this new node.

The other Node Edit menu selections

As you noticed when you accessed the Node Edit menu, it provides a variety of selections. With these you can:

- Add, align and delete nodes
- Break a curve in two at the point where a node is located, or join two nodes on the same curve
- Convert a curve to a line or a line to a curve
- Convert nodes of one type to another type.

Node Edit	
Delete	Add
Break	Join
toLine	toCurve
Cusp	Smooth
Align...	Symmet
Cancel	

Using the Node Edit menu, you can perform a variety of node-related actions.

Practicing node-editing curves

Learning to shape curves effectively is not something that can be fully explained in a tutorial. It's best mastered by experimentation and practice. What you've learned here should get you started. But it would be a good idea to read the section of the User's Manual titled *The ↗ Tool: Lines/Curves*.

8. Before moving on, practice shaping curves, using the  tool to zoom in and out when necessary. Here's additional information that will give you more actions to try out as you experiment:
 - In addition to selecting a node by clicking on it, you can select it by clicking on the line or curve segment associated with it
 - You can select multiple nodes using marquee select or by holding the Shift key while selecting
 - If a node and control point overlap, you can pull the control point away from the *unselected* node by holding Shift and dragging the control point
 - When drawing in Bézier mode, you can alter each node as you place it, determining the shape of the curve segment leading to the next node you create
 - Using Control when moving a control point constrains its movement to horizontal or vertical
 - The Status line displays information about a selected node and its associated line or curve segment, the amount by which you move a node, and the number of nodes selected.

When you've practiced shaping curves as much as you want to, move on to learn how to kern text.

Exercise 4

(d) Kerning text and changing character attributes

Text nodes are used to kern text, altering the spacing between characters. They can also be used to change character attributes such as typeface, point size and character angle. And, if you change the text to curves first, you can use nodes to shape the curves just as you would any other curves.

1. To get started:
 - Display a new page
 - Select the  tool and type the word Corel
 - Use the  tool to magnify your text
 - Select the text using the  tool.

Notice there is a node at the base and to the left of each character, and two spacing arrows ( and ). We'll concentrate on the nodes for now, and use the spacing arrows in step (f) of this exercise.

Kerning text

When working with text, you sometimes want to kern it; moving individual characters slightly to change the spacing between them, making the text more readable.

2. To move the letter C for example:
 - Use  to select the node below and to the left of the letter C.
 - Drag the letter slightly to the left and above or below its present location.



You've dragged your character up or down and to the side. But when kerning, you usually want to move a character left or right but not up or down.

3. To realign the character vertically with the other characters in the string:
 - In the Menu Bar, select Arrange
 - In the Arrange menu, select Align to Baseline.



Kerning adjusts the spacing between characters.

The horizontal move has been retained, but the vertical move has been erased, returning the character to its appropriate baseline. You can easily avoid this additional step simply by pressing the Control key when moving the letter. It ensures that its baseline is retained, and that it only moves horizontally.

4. You can move two or more characters at the same time by selecting all of their nodes, then moving one of them. Try it, moving the characters as much or little as desired. Then use the Undo command in the Edit menu to return the characters to their original location.

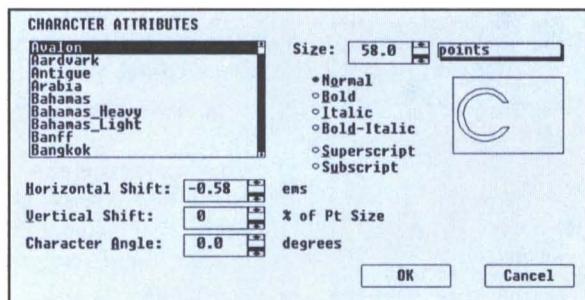
Changing character attributes

If you use ► to double-click on a text node, you access the Character Attributes menu. You can use it to change a variety of attributes assigned to the character.

5. To change the point size and angle of the C in Corel:

- Access the Character Attributes menu by double-clicking on the letter C's node (You could also do it by selecting the node then selecting Character Attributes in the Edit menu.)
- Increase the point size of the letter, and give it a Character Angle of 45 degrees. Then click on OK.

By selecting more than one character, you could assign attributes to several letters in the string at once. You can also assign different attributes to each character to create special effects like the ones shown below.



To change the attributes of one or more letters in a text string, use the Character Attributes dialog box.



To create special effects, assign different attributes to each character in a text string.

Exercise 4

(e) Shaping ‘text’

Strictly speaking you can't shape text. But you can convert text to curves, then shape the curves with the **A** tool just as you would curves created with the **L** tool.

1. To get started:

- Display a new page
- Use the **A** tool to create a text string of one or two words — your name, for example.



2. Next, to convert the text to curves:

- Use the **A** tool to select the text string (As a shortcut, simply press the space bar.)
- From the Arrange menu select Convert to Curves.

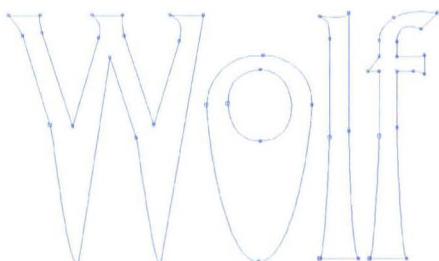
What was text is now a series of curves in the shape of letters. If you select Undo before performing any other action, you'll change the curves back to text. But if you wait till later, there's no going back; your curves can't be reconverted to text.

To change text to curves that you can shape, select Convert to Curves.

Now that your text string is actually a series of curves, you can shape it using the **A** tool, just as you would any other curves.

3. To shape your curves:

- Select the **A** tool from the Toolbox
- Select a node, or marquee select several nodes
- Drag the nodes to move them, and use their control points to shape them to achieve any effect you want.



(f) Adjusting text spacing

When working with text you may also want to change the spacing between characters, words or lines. You can do this using the Spacing dialog box, which is accessed from the Text dialog box discussed in Lesson 2 (f). But you can also do it interactively, using the  tool and the text spacing arrows ( and ).

1. To begin, on a new page create two short lines of text, as we have here.

*Unleash your
imagination!*

2. To change the spacing between the lines of text:

- Select  from the Toolbox
- Place  on  so it becomes , then press the mouse button to turn the cursor shape into 
- Drag down to increase the inter-line spacing or up to decrease it
- Release the mouse button.

*Unleash your
imagination!*

*To change the inter-line spacing,
drag  up or down.*

3. To change the spacing between letters, repeat step 2 using the  arrow and moving it left or right to decrease or increase the inter-character spacing.

*Unleash your
imagination!*

*To change the inter-letter spacing,
drag  left or right.*

4. To increase the inter-word spacing, repeat step 2 again, but use the  arrow and hold the Control key while dragging. Be sure to release the mouse button before the Control key.

*Unleash your
imagination!*

*To change the inter-word spacing,
drag  left or right while holding
the Control key.*

Practice shaping ‘text’ and adjusting text spacing before moving on.

Summary

In Lesson 4, you learned how to:

- Shape rectangles and ellipses.
- Zoom in and out on objects.
- Shape curves.
- Kern text and change its character attributes.
- Shape 'text'.
- Adjust text spacing.



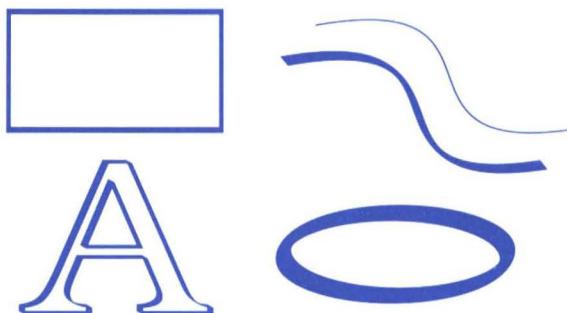
CLiK

Created with CorelDRAW by Ward Maxwell, Toronto, Ontario, Canada

5 Outlining objects (¶)

Introduction

So far, all the objects you've drawn have had the same outline. But with CorelDRAW's outline pen (¶) you can vary the width, shape and color of outlines. You can create interesting effects, including calligraphic-pen-like shapes for text and other objects.



With the ¶ tool, you control the width, shape and color of objects' outlines.

In this chapter you'll learn how to establish outline width, shape and shading or color. Of course, color will be of more interest to you if you have a color monitor and printer.

Also in this chapter, because changes in an outline's appearance aren't visible in the Editing window, you'll start making use of the Preview window.

Overview

In lesson 5, you'll:

- (a) Learn to use the Preview window to view changes in the width, shape and color of objects' outlines.
- (b) Use the ¶ tool to set defaults for the outline width and color of new objects.
- (c) Create a custom outline shape and width for an object using the ¶ selection in the ¶ menu.
- (d) Create a custom outline color using the ¶ selection in the ¶ menu.

Exercise 5

(a) Using the Preview window

During your tour of the CorelDRAW screen in Lesson 1, you learned that a Preview window is available to display changes to the attributes you assign objects. So far it hasn't been needed. But in this lesson and the next you'll be working with object outlines and fills. So you'll want to use the Preview window to view the effects of the changes you make.

1. To start this lesson:
 - Display a new page
 - Activate the Preview window by holding down the Shift key and pressing F9.

As you can see, the Preview window appears to the right of the Editing window, although you can also have it occupy the whole screen by pressing F9 without holding Shift. In either case, it displays outline and fill characteristics that take time to draw on the screen. If these characteristics were displayed in the Editing window, drawing time would increase. Being able to turn off the Preview window decreases drawing time, increasing efficiency.

The Preview window's toolbox

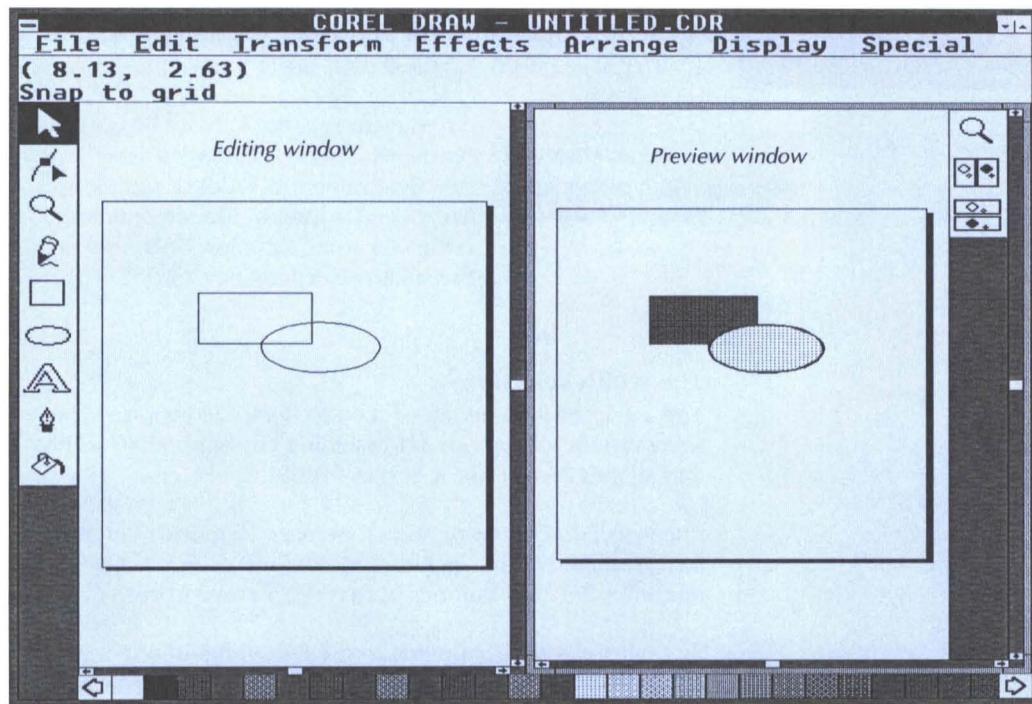
2. The Preview Window has its own toolbox. If it isn't already visible, to activate it:
 - Select the Display menu from the Menu Bar
 - If Show Preview Toolbox doesn't have a in front of it, click on Show Preview Toolbox.



The Preview window's toolbox.

The toolbox is displayed in the upper right of the Preview window. It includes a zoom tool (Q) like the one you're familiar with, and two other tools that look like windows beside each other and above and below each other.

3. To try out the second and third tools:
 - First select the above and below windows. It will change the orientation of the Editing and Preview windows from side-by-side to above-and-below.
 - Next, to return to the original side-by-side orientation, select the side-by-side windows tool.



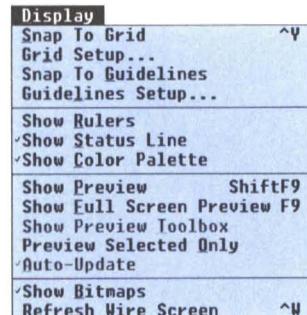
The Preview window can be displayed to the right of the Editing window as shown here, or below the Editing window. It can also occupy the full screen.

The 'Preview selected only' option

You have the choice of viewing the outline and fill characteristics of *all* your objects, or only selected objects. Viewing selected objects saves even more time, because unselected objects needn't be redrawn every time you change the attributes of the selected object.

4. In the following lessons you'll want all your objects displayed, so:
 - Select Display from the Menu Bar
 - If Preview Selected Only has a in front of it, click on this selection to remove the . If it has no , click away from the menu to leave it as is.

You now know how to use the Preview window. Any time you want to hide it, press Shift-F9 again.

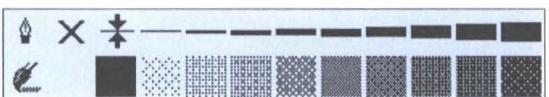


Settings in the Display menu determine how the Preview window is used.

Exercise 5

(b) Setting outline width and color defaults

1. To get started using the  tool, select it from the Toolbox.



The  tool flyout menu.

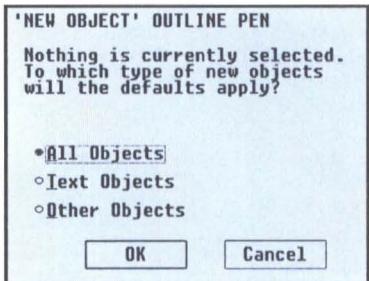
As you can see, the  flyout menu has two lines of icons. The ones in the top line determine the width of outlines. Those in the bottom line determine outline shading or color. We'll look at the width selections first.

The width selections

The  selection at the left of the top line of icons provides access to the dialog box for assigning custom outline widths and shapes. You'll use it in part (c) of this exercise.

The selections to the right of  are used to quickly assign basic outline widths, including no outline at all () , a hairline () , and outlines between 0.5 and 24 points.

2. To try out the shape line in the flyout menu, select .



The 'NEW OBJECT' OUTLINE PEN dialog box has appeared because you didn't select an object before specifying a line width. It lets you establish a default line width to be applied to all new objects you draw.

3. To establish hairline as the default line thickness for all objects, click on OK.

The color selections

4. Select  from the Toolbox again, and we'll look at the bottom line of selections in the flyout menu.

The  selection at the left of the bottom line of icons is similar to the  selection above it; it accesses the dialog box for assigning custom outline colors. You'll use it in part (d) of this exercise.

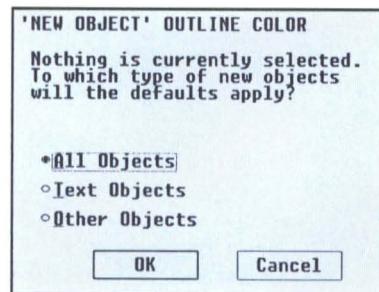
The eleven selections to the right of are used to quickly assign white, black, and nine shades of gray to objects' outlines. The white selection is between and black. The grays that follow it represent shades from 10 to 90 per cent black.



5. To try the outline fill line in the flyout menu, select the black option; third from the left, just to the right of the white selection.

Now the 'NEW OBJECT' OUTLINE COLOR dialog box is displayed, again because you didn't select an object before specifying an outline color. It lets you establish a default line color to be applied to all new objects you draw.

6. To establish a black outline for all future objects, click on OK.



Trying out your options

7. Now that you've established defaults for line width and color, try assigning different outline widths and shadings to actual objects:
 - First draw a variety of objects
 - Then select them one at a time, and assign some of the menu's already-discussed pre-set options for line width and shading (that is, any of the selections to the right of and in the flyout menu).
 - Observe the differences between the objects' appearance in the Editing and Preview windows.

When you have a good feel for how the pre-set selections work, you're ready to use the menu's selection to assign custom outline widths and shapes, and its selection to assign custom outline color.

Exercise 5

(c) Creating custom outline shapes (1)

1. To get ready to try out the custom outline shape feature:
 - Display a new page
 - Make sure the Preview window is activated
 - Draw a good-sized ellipse, and select it.

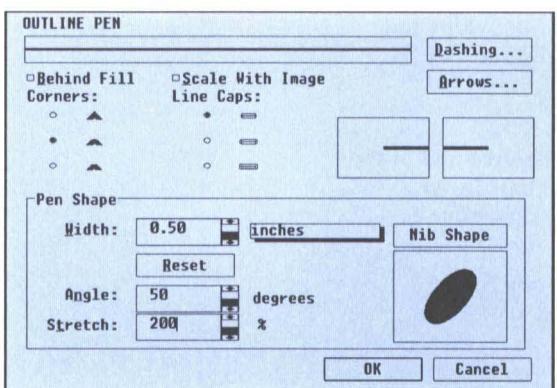
The default hairline outline that you established in part (b) has been assigned to the ellipse, so it looks the same in both the Editing and Preview windows. Now you're going to change the width and shape of the outline.

2. To begin, access the Outline Pen dialog box:
 - From the Toolbox, select the  tool
 - From the  flyout menu, select the  icon from the left of the top line.

A quick tour of the Outline Pen dialog box

The Outline Pen dialog box provides a variety of ways to customize object outlines. Briefly, its components include:

- Dashing and Arrows buttons. These access additional dialog boxes for selecting preset or custom-designed outlines and line ends.
- Display boxes below the Dashing and Arrows buttons. They show the type of outline and line ends already selected.
- A Behind Fill button. It lets you specify whether an object's outline is to appear in front of or behind the outline's fill. (Outlines behind the fill have half the width of those in front.)
- A Scale with Image button. It determines whether or not the outline thickness changes if you change the size of the object.
- Corner selections, including miter, round and beveled.
- Line cap selections, including butt, round and square.
- A Pen Shape box used to customize an object's outline. You'll try it out next.





Using the Outline Pen dialog box, you can establish custom outlines like these ones for the objects you've drawn.

Using the Pen Shape feature

3. To try out Pen Shape, set these values:

- First, in the Corners section above the Pen Shape portion of the dialog box, select round by clicking on the radio button for the second of the three Corner choices
- Next, in the Pen Shape portion of the dialog box, set the Width to 0.50 inches, the Stretch to 200% and the Angle to 50 degrees, noticing the effect this has on the Nib Shape displayed to the right of your settings
- Finally, click on OK and have a look at the effect of your changes on the ellipse.

That's a simple example of how the Outline Pen customizes an outline. Before moving on, experiment. For example, create the letter A in the Banff typeface at about 200 points. Then set the corners to round, the Pen Shape width to 0.08, the angle to 50, and the stretch to 300. The result should look like the example at the top right of this page.

Experiment with outline shape as much as you want to before moving on to create custom outline fills.

Exercise 5

(d) Creating custom outline colors (C)

- To get ready to try the custom outline color feature:
 - Display a new page
 - Make sure the Preview window is turned on
 - Draw and select a good-sized square, and use the  tool's custom outline shape selection (C) to assign it an outline width of 0.50 inches.

What you should see on your screen now is a square in your Editing window with a hairline-width outline, and the same square in the Preview window with a half-inch outline. The outlines are black because of the default set in part (b).

Outline: 0.500 inches



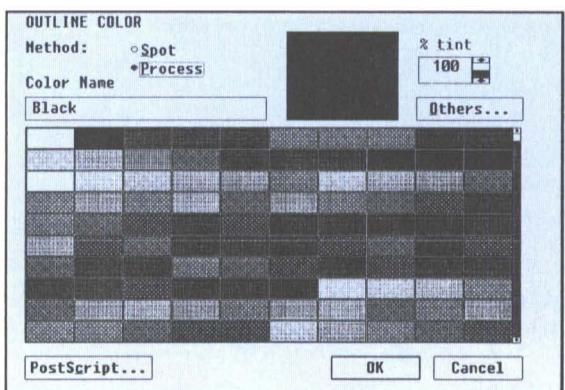
Notice that, at the right of the Status line, the Outline thickness is listed as 0.500 inches. The small box with an X to its right indicates that the object's interior has no fill.

Using the square you've drawn, we're going to explore CorelDRAW's options for assigning colors to objects' outlines.

- Outline colors are assigned using the custom color selection (C) in the outline flyout menu, so:
 - To display the Outline flyout menu, select  from the Toolbox
 - To display the Outline Color dialog box, select C from the Outline flyout menu. (If the dialog box on your screen is different from the one shown below, your program's defaults are set differently. To access the correct dialog box, click on Palette in the box on your screen.)



Custom outline colors are mixed using the C selection on the  flyout menu.



The Outline Color dialog box

Let's look over the Outline Color dialog box:

- Method provides the option of using spot or process methods for printing
- The square to the right of Method displays a sample of the color currently selected
- % tint shows the tint of spot colors
- The Color Name is displayed above a color palette

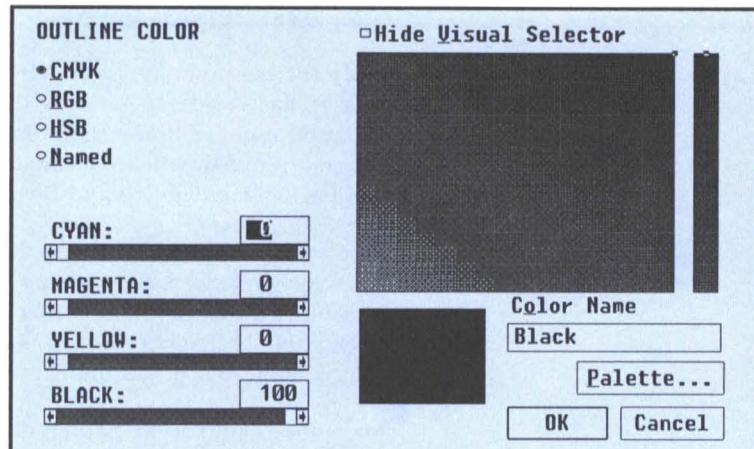
- The Palette displays the colors (up to 800) that you've mixed and named using a second dialog box we'll examine soon
- The PostScript selection in the lower left provides access to PostScript halftone fills you can use only with Spot colors on a PostScript printer
- Finally, the Others selection in the upper right of the screen provides access to the second dialog box we mentioned; the one for mixing colors.

The Process Outline Color Dialog box

- To access the Outline Color dialog box for mixing colors:
 - First click on Process in the Method section at the upper left of the Outline Color Dialog Box
 - Next click on the Others button at the upper right of the dialog box.

The Outline Color box provides four methods for choosing outline colors. You can get the same results using any of the four. The one you use depends on which you prefer. They include:

- CMYK, for mixing cyan, magenta, yellow and black to create colors
- RGB for mixing red, green and blue
- HSB for mixing by altering hue, saturation and brightness
- Named, for selecting Pantone colors or colors you've already mixed and assigned names to.



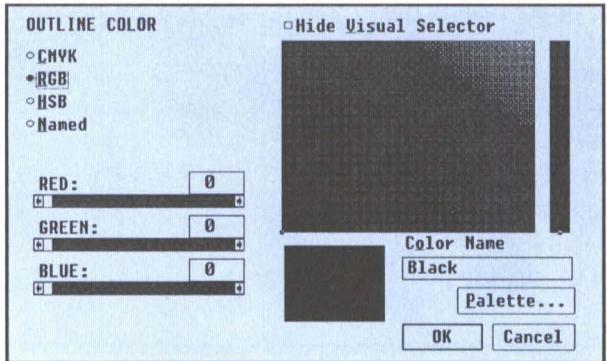
You can use any of the CMYK, RGB or HSB methods to design process colors. And you can select 'Named colors'.

All four methods work similarly. In the next part of this exercise we'll use the RGB method to give you an idea how to select an outline color.

Exercise 5

(d) Creating custom outline colors (C) (cont'd)

- To begin selecting a custom RGB outline color:
 - In the Outline Color dialog box, click on RGB
 - If the Hide Visual Selector box has an 'X' in it, click on it so that the selector box is no longer hidden.



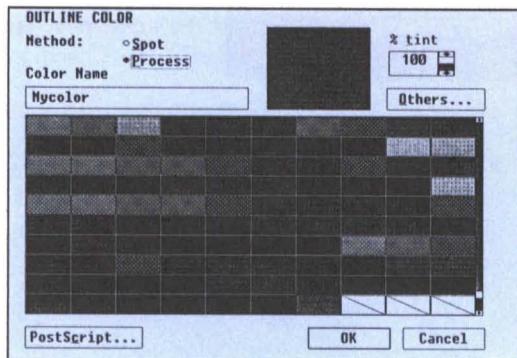
The Visual Selector box is actually two boxes; one a large rectangle, the other a long, thin rectangle. Both have a small node-like button. The button in the larger box is at the lower left, and the one in the smaller box is at the bottom. In these positions the result, as the sample box shows, is Black, the default color established earlier. You're now going to use those buttons to design a color.

- Move the button in the larger Visual Selector box part way up its left side, then notice the effect on the value entered for Green in the slider box to the left of the selector. Move the button to the top and the Green value will be 100.0, while Red and Blue remain 0.
- Next, move the same button to the right, along the top of the selection box, and notice the effect on the Red value. Move it to the upper right corner and the values for Green and Red will be 100, while Blue is still 0. As the sample indicates, the resulting color is Yellow.
- Move the button at the bottom of the smaller Visual Selector box up, stopping at various points and noticing the effect on the blue component of the color.
- Experiment with the two buttons, moving them until the color displayed in the sample box appeals to you. (You can also use the three slider controls to the left of the Visual Selector to specify precise values for each of the colors.) Then, in the Color Name box, key in the name Mycolor, but *don't* press the Enter key.

- To return to the first Outline Color dialog box, click on the Palette button.

Back in the Outline Color dialog box, the Color Name is Mycolor. The last color in the palette is also Mycolor. If you want to, you can move Mycolor closer to the top of the palette by dragging it.

- To assign Mycolor to the outline of your square, select OK.



The outline of your square in the Preview window is no longer Black but Mycolor; the color you created using the selection in the tool flyout menu.

Using a shortcut method to assign outline colors

There's a much faster method for assigning already-defined colors to objects' outlines. To try it:

- Access the Display menu and, if it isn't already selected, select Show Color Palette.

A color palette displaying up to 800 colors is now displayed at the bottom of the screen, with scroll bars for moving to the color you want.

- To assign an outline color to a selected object, use the *right* mouse button to click on the color in the palette. You'll find Mycolor at the far right of the palette.

Before moving on, practice what you've learned in this lesson. Try the CYMK, HSB and Named methods of selecting colors if you want to. And practice using the right mouse button and the palette at the bottom of the screen to assign outline colors to different objects.

Summary

In Lesson 5, you learned how to:

- Use CorelDRAW's Preview window.
- Set outline width and fill defaults using the  tool.
- Create custom outline shapes using the  tool's  selection.
- Create custom outline colors using the  tool's  selection.

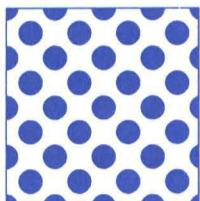


Woman's Illusion
Created with CorelDRAW by Anniek Le Cabellec, Brussels, Belgium

6 Filling objects (fillType)

Introduction

In this lesson, you'll learn to use the fill tool (fillType) to fill the interiors of objects with grays, colors, bitmap and vector patterns, fountain fills and PostScript textures.



Carel



With the **fillType** tool you control the type of fill your objects contain.

Overview

In lesson 6, you'll:

- (a) Fill the interiors of objects with grays and colors.
- (b) Fill objects with bitmap and vector patterns.
- (c) Fill objects with fountain fill effects.
- (d) Fill objects with PostScript textures.

Exercise 6

(a) Filling with grays and colors

To get started, display a new page. And make sure the Preview window is activated so you can see changes that occur when you fill objects. When you've done that, we'll set a default of no fill before trying out CorelDRAW's fill options.

Setting the default fill

1. Set the default fill just as you did the default outline, using the  tool instead of the  tool:



The  tool flyout menu.

- With no objects drawn, to display the  flyout menu, select  from the Toolbox
- From the  menu, to indicate no fill, select 
- In the 'NEW OBJECT' UNIFORM FILL dialog box, click on All objects, then on OK.

Now the interiors of objects you draw will have no fill.

Filling with grays

You can use the  tool flyout menu to fill objects with black, white and shades of gray.

2. To get started, draw and select a large square.
3. To fill your square with white, black and grays:
 - Select  from the Toolbox
 - Try the various selections in the bottom row of the  menu to fill your square with white, black and shades of 10-90% gray.



You can fill objects with grays using both the palette at the bottom of the screen and the  tool.

As you experiment with the fills, notice that the name of the color (or shade of gray in this case) is displayed at the right of the Status line. A sample is provided too, in case the Preview window isn't turned on.

You can also fill objects with grays from the color palette at the bottom of the CorelDRAW screen. You used the palette and the right mouse button to change outline fills in Lesson 5. You fill interiors using the same method, but with the *left* mouse button.

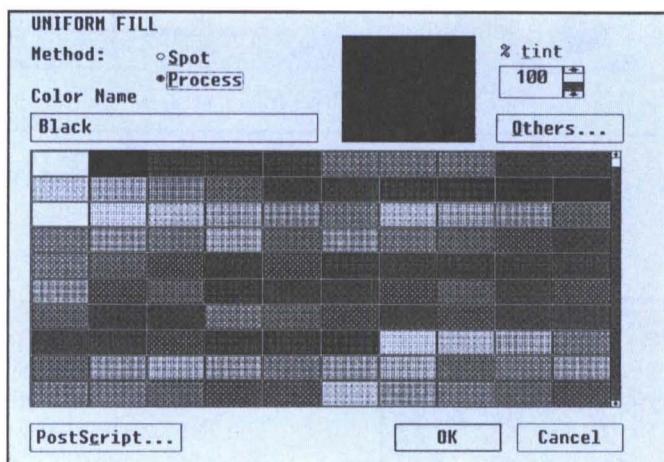
- To try out the color palette's grays, select your square and, using the left mouse button, click on grays in the color palette. You can scroll the palette one color left or right using the left mouse button to click at the end of the scroll bar. To move a screenwidth of colors at a time, click on the scroll bar with the right mouse button.

Filling with colors

You can also color objects using both the color palette and the  flyout menu.

- Continue to experiment with the palette as you did when filling with grays. But select a wider range of colors, noticing the effect on your square's fill and on the information in the Status line. You should be able to find Mycolor that you defined in Lesson 5.
- To fill your square with colors using the  flyout menu:
 - Select  from the Toolbox
 - Select  from the upper left of the  flyout menu.

The UNIFORM FILL dialog box is identical to the OUTLINE COLOR dialog box you used in Lesson 5 (d). You use it in the same way, assigning existing colors from the palette or using spot or process methods to create colors. The only difference is that the colors are for filling object interiors instead of outlines.



- Practice using the UNIFORM FILL option to assign different colors to the interior of your square. It's essentially a review of what you did when coloring object outlines, except you're now filling interiors.

Exercise 6

(b) Filling with bitmap and vector patterns

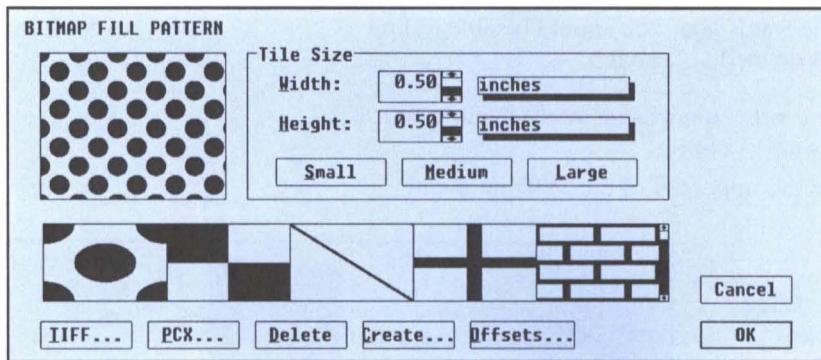
In addition to grays and color fills, CorelDRAW provides bitmap and vector pattern fills. And it gives you the ability to create your own pattern fills.

Bitmap fills

1. To access the selection for using bitmap fills:

- Select  from the Toolbox
- Select  from the top line of the  flyout menu.

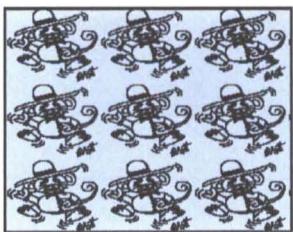
The BITMAP FILL PATTERN dialog box provides a series of bitmap images you can use to fill objects, a Tile size box for changing the image size, options for importing TIFF and PCX files to create your own bitmap patterns, a Delete option to get rid of patterns you don't want, a Create option for designing



your own bitmap fills, and Offset for positioning the patterns in the object you're filling.

2. To try out this feature:

- Scroll through the available bitmaps, and select one that appeals to you by clicking on it
- Experiment with the sizing if you want to, by selecting small, medium or large, or by changing the values in the Tile size box. Any changes you make will be reflected in what is displayed in the box in the upper left of the screen.
- To choose the bitmap and access the BITMAP PATTERN COLOR dialog box, select OK
- To leave the bitmap's color as is, and view the effect of the bitmap fill on your square, in the BITMAP PATTERN COLOR dialog box click on OK.

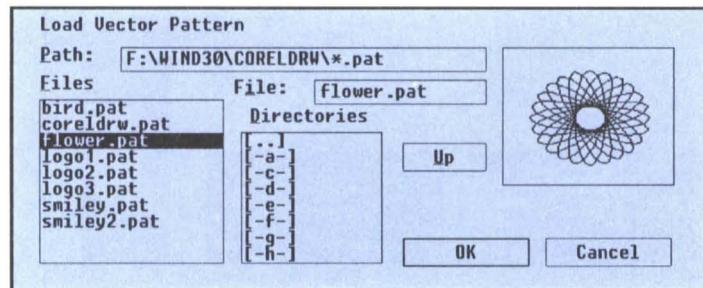


In addition to preset bitmap patterns, you can design your own custom bitmap fills.

Vector fills

3. Next, with your square still selected, to access the selection for using vector fills:
 - Select  from the Toolbox
 - Select  from the  flyout menu.

Although you may need to change the active subdirectory to find them, the LOAD VECTOR PATTERN dialog box lists .PAT files containing vector pattern fills. When you click on a file, a sample of the fill is displayed in the preview box in the screen.



4. Find a vector fill that you like, then select OK to access the VECTOR FILL PATTERN dialog box.

Using this dialog box you can change the size of the vector tile and offset the alignment of the vector pattern.

5. To try out the vector fill you've chosen, in the Tile Size box click on Large. Then click on OK.

Your square is now filled with the chosen vector pattern.

Creating new patterns

6. We mentioned the Create option for bitmap fills. There's a second method for creating bitmap fill patterns and vector patterns. Let's take a quick look at it now:
 - With your square still selected, from the Menu bar select the Special menu
 - From the Special menu, select Create Pattern.

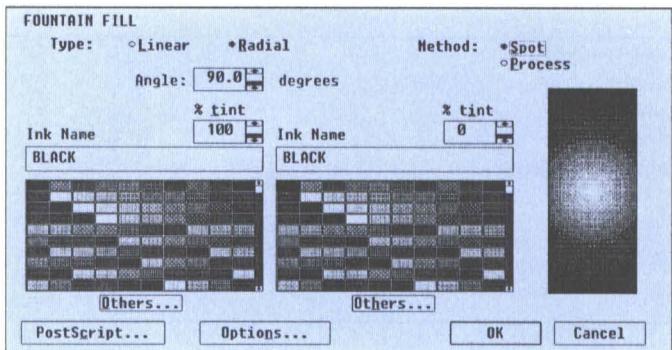
As you can see, the Create Pattern dialog box provides options for creating bitmap or vector fills and for specifying their resolution. The feature is covered in detail in the User's Manual.

7. For now, rather than create a pattern, click on Cancel and we'll move on to Fountain fills.

Exercise 6

(c) Using fountain fills

- To access the selection for using fountain fills:
 - Select  from the Toolbox
 - Select  from the top line of the  flyout menu.



The Fountain Fill dialog box provides options for determining the Type of fountain fill to be used, the color Method, and the range of colors from and to which the fill will radiate. The best way to understand fountain fills is to try one.

- To establish a radial fill for your square:
 - Select Radial as the Type of fountain fill
 - Select Spot as the color Method
 - Notice that the color palettes for the start and end colors of the fill run from 100% to 0% black; in other words, black to white.
 - Select OK.



Typical fountain fills.

Your square is now filled with a color pattern that begins with a white center and radiates out in increasing amounts of gray until it reaches black. You could have used the color palettes in the Fountain Fill dialog box to choose other colors, including ones you've created yourself.

You may have noticed an Options selection in the Fountain Fill dialog box as well. Using it you can change the center from which the fill radiates, to create a variety of effects.

If you want to return to the Fountain Fill dialog box and try it some more, perhaps using objects other than a square, go ahead. Otherwise, move on to the final type of fill we'll touch on; PostScript Textures.

(d) Using PostScript textures

If you've been experimenting with fills in different objects, display a new page. Then draw and select a square or other object you can use to explore PostScript fills.

PostScript textures are available only if you use a PostScript printer. Even then they aren't visible on your monitor. They're displayed in an appendix in the User's Manual, and they appear when you print your drawing on a PostScript printer.

1. To access the selection for using Postscript textures:
 - Select  from the Toolbox
 - Select PS from the  flyout menu.

As you can see, the POSTSCRIPT TEXTURE dialog box provides a list of named textures you can scroll through and select from. And it displays an area where you can change certain variables affecting the printed appearance of your selection.

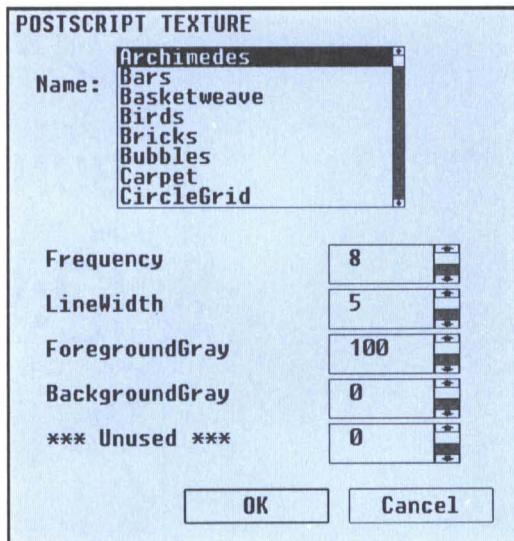
2. To try out the textures, select one from the list, then click on OK.

Your square, or other object, is now filled with the letters PS, indicating it contains a PostScript texture that will appear when you print the object on a PostScript printer.

That covers the types of fills — grays and colors, bitmap and vector patterns, fountain fills and PostScript textures — that you can use inside objects. In the next chapter you'll learn how to arrange objects.



On your monitor, PostScript textures look like this. The actual textures are visible on the printed page and in an appendix to the User's Manual.



Summary

In Lesson 6, you learned how to:

- Fill the interiors of objects with grays and colors.
- Fill objects with bitmap and vector patterns.
- Fill objects with special fountain fill effects.
- Fill objects with PostScript textures.



Watch

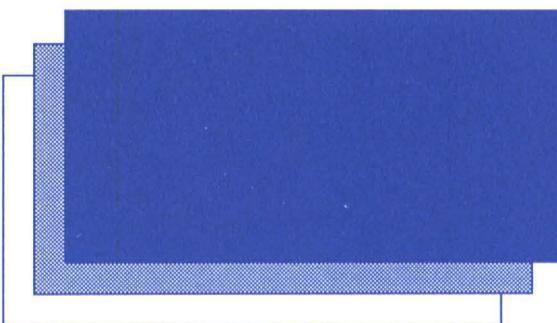
Created with CorelDRAW by Doug Wong, Ottawa, Ontario, Canada

7

Arranging objects

Introduction

Objects seldom exist in isolation. So it's important to know how to arrange them in relation to one another; how to place one over or under another, how to group and ungroup two or more of them, and how to align them.



It's important to know how to arrange objects over and under one another.

In this lesson you'll learn the basics of performing these operations. You'll also learn how to duplicate and delete objects, and how to fit text to a path.

Overview

In lesson 7, you'll :

- (a) Duplicate and delete objects.
- (b) Move objects in front of and behind one another.
- (c) Group and ungroup objects.
- (d) Align objects.
- (e) Fit text to a path.

Exercise 7

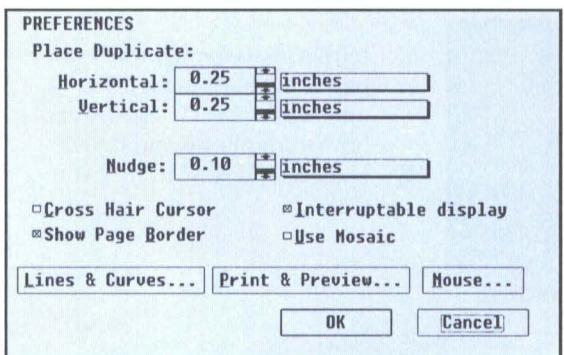
(a) Duplicating and deleting objects

- To prepare for this lesson:
 - Display a new page
 - Make sure the Preview window is activated
 - Draw a rectangle about two by four inches.

Duplicating an object

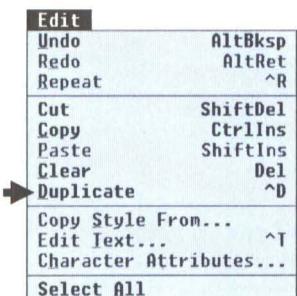
When you duplicate an object, such as the rectangle on your screen, the location of the duplicate on the page depends on settings in the Preferences dialog box.

- To access Preferences, select Special from the Menu bar, then select Preferences from the Special menu.



You passed through this dialog box on your way to Lines and Curves in Lesson 2 (e). This time we'll focus on Place Duplicate. The Horizontal and Vertical entries determine where the duplicate is placed in relation to the original. For example, if your entries are +1.00 inch and -1.00 inch, duplicates will be placed an inch to the right and an inch below the original.

To try it:



- Set the Horizontal and Vertical entries both to 0.25 inches, then click on OK.
- To duplicate the rectangle:
 - Select it
 - In the Menu bar, select the Edit menu
 - In the Edit menu, select Duplicate.

A duplicate of the rectangle has been placed a quarter-inch above and to the right of the original, and has been selected automatically.

- To duplicate the second rectangle using a shortcut, hold the Control key and press the letter D.

Now you have three rectangles; your original, and the duplicates created a quarter-inch above and to the right of the previously selected one.



Deleting an object

You can delete objects using a menu selection or a shortcut.

6. To delete the selected rectangle:
 - From the Menu bar, select Edit
 - From the Edit menu, select Clear.
7. To delete a rectangle using the shortcut:
 - First return the deleted rectangle by selecting Undo from the Edit menu (or by holding the Alt key and pressing Back Space)
 - Next, to delete it again, simply press the Delete (Del) key.
8. You'll need all three rectangles for the next part of the lesson. So, once again, Undo your deletion so that you're left with three rectangles on your screen.

Using other selections on the Edit menu you can cut, copy and paste objects. If you want to try them out on your own, go ahead, referring to the User's Manual if you need help. Just make sure you leave your three original rectangles in place, because you'll need them for the next part of this exercise.

Next you'll learn how to move objects in front of and behind each other.

Lesson 7



(b) Moving objects to front and back

When you duplicated rectangles, the duplicate was placed on top of the original. CorelDRAW always does this, building from the bottom up. One way to confirm it, and to provide objects to move to front and back, is to fill each of your three rectangles with different colors.

1. To fill the bottom rectangle with white:
 - Select the rectangle
 - Move the cursor to white in the color palette, and click with the left mouse button.

To confirm that you've filled the rectangle with white, look at the fill information in the Status line. You'll find this information useful throughout the exercise.

2. To fill the middle and top rectangles with gray and black respectively, repeat step 1 twice, choosing a gray shade then black from the color palette.

The selections used to move objects above and below one another are in the Arrange menu. The following steps illustrate how to use this menu.

Arrange	
To Front	ShiftPgUp
To Back	ShiftPgDn
Forward One	PgUp
Back One	PgDn
Reverse Order	
Group	^G
Ungroup	^U
Combine	^C
Break Apart	^K
Convert To Curves	^U
Align...	^A
Fit Text To Path	^F
Align To Baseline	^Z
Straighten Text	

*The first group of
Arrange menu selections
determine the top-to-bottom
order of objects.*

3. To move the white rectangle to the front:
 - Select it
 - From the Menu bar, select Arrange
 - From the Arrange menu, select To Front.
4. To move the white rectangle to the back again, from the Arrange menu select To Back.
5. To move the white rectangle forward one level, so it's in front of the gray but behind the black one, from the Arrange menu select Forward One.
6. To move the black rectangle to the back, reversing the original order:
 - Select the black rectangle
 - From the Arrange menu, select To Back.

7. To return to the original bottom-to-top order (white, gray, black):
- Marquee select all three rectangles
 - From the Arrange menu select Reverse Order.

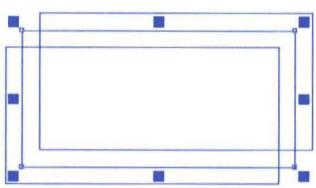
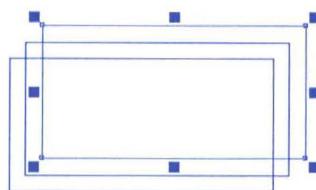
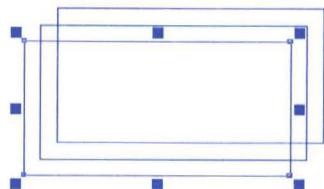


The original order reversed.

A shortcut for selecting layered objects

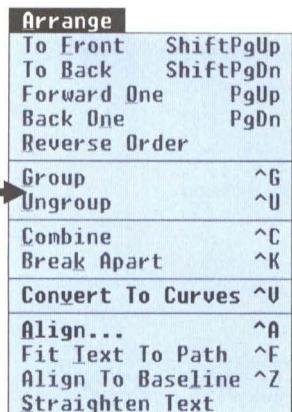
There's a quick way to change which object on your screen is selected. When several objects are layered the way your rectangles are, it can be very useful.

8. To try it:
- Select the bottom (white) rectangle
 - Press the Tab key once and notice that now the top (black) rectangle is selected
 - Press the Tab key again and notice that the middle (gray) rectangle is now selected
 - Press the Tab key repeatedly and notice that the selected object keeps changing.



Pressing the Tab key changes the object selected.

In this part of the exercise you learned how to arrange objects over and under one another, and how to select the object you want. Next you'll learn how to group and ungroup objects.



Group and Ungroup are
Arrange menu selections.

(c) Grouping and ungrouping objects

1. To prepare for this part of the exercise:
 - Display a new page. (You won't need the Preview window, so hide it if you want to.)
 - Add the word Corel at a size of about 100 points
 - Draw a rectangle surrounding the word Corel.

Grouping objects

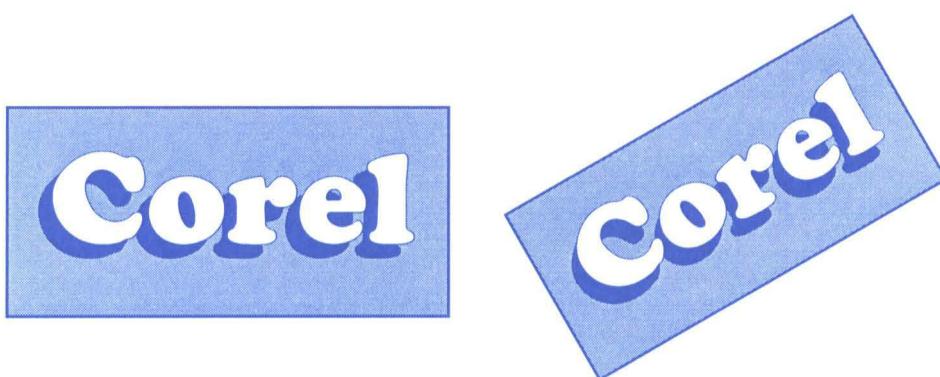
You now have two objects on your screen; a text string and a rectangle.

2. To group the objects:
 - Marquee select them, and notice that the Status line displays the message 2 objects selected
 - From the Menu bar, select the Arrange menu
 - From the Arrange menu, select Group.

To confirm that you've grouped your two objects, check the message in the Status line.

Working with a group

3. To illustrate how grouped objects respond to actions you perform on them:
 - Double select your already-selected grouped objects by clicking on them again to display rotate and skew arrows
 - Use one of the rotate arrows to rotate the group the way you rotated objects in Lesson 3 (e).



When objects are grouped, actions performed on one of them apply to all of them.

When you rotated the group, both objects rotated the same amount. If you perform other actions on the group the result will be the same: both objects will be affected. No matter how many objects are included in the group, all will respond in the same way.

Ungrouping objects

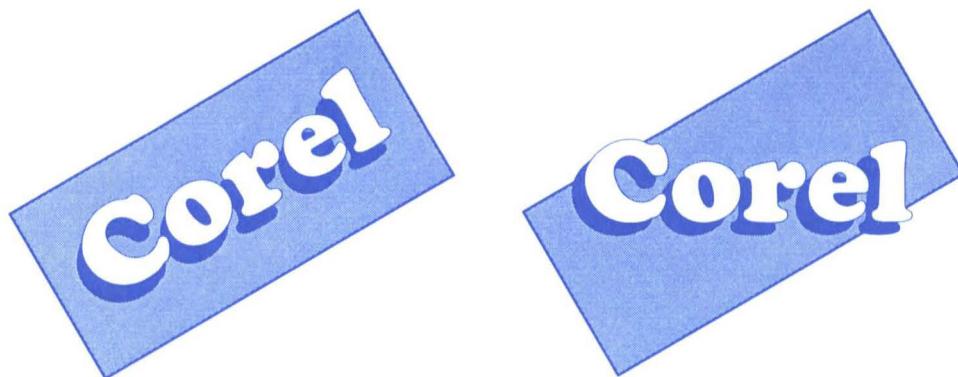
4. To get rid of the rotate/skew arrows so that the group of objects is simply selected, click on their outline again.
5. To ungroup the objects, in the Arrange menu select Ungroup.

Notice that the message in the Status line is once again 2 objects selected.

6. Next:
 - To unselect the selected object, click on an open space
 - Double-select the rectangle to display rotate/skew arrows around it
 - Rotate the rectangle.

This time, because you ungrouped the rectangle and text string, only the rectangle moved.

If you want more practice grouping and ungrouping objects, draw a variety of objects, group them, then try performing various transformations or other actions on them.



When grouped objects are ungrouped again, actions apply only to the selected object.

Exercise 7

(d) Aligning objects

When you're working with several objects to create a single drawing, you often want to align them. In this part of the exercise, to introduce you to alignment, you'll center text inside a square.

1. To get started:

- Display a new page
- At the top of the page, add the word Text about 100 points in size
- At the bottom of the page, draw a square large enough to enclose the word Text.

Centering the objects

You now have two objects: a text string and a square.

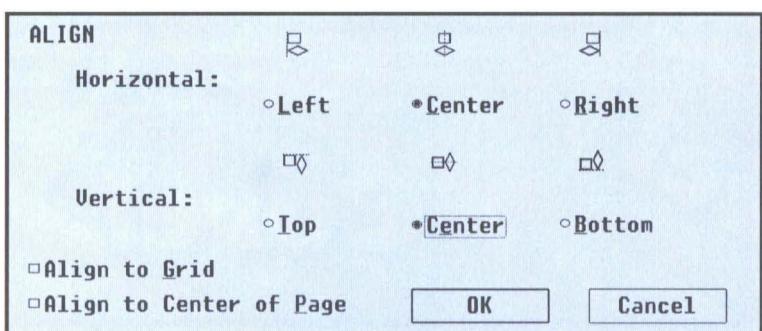
2. To select both objects:

- Press the space bar to automatically select the square that you drew last
- Hold the Shift key and select the text so that both the square and text are selected.

3. You align objects using the Align dialog box. To access it:

- From the Menu bar, select Arrange
- From the Arrange menu, select Align.

Horizontal and Vertical entries in the Align dialog box determine how the objects you've selected will be aligned.

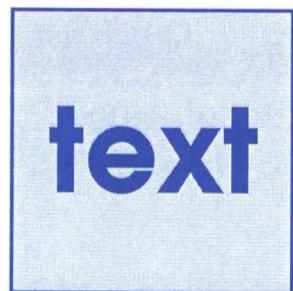


The Horizontal options are Left, Center and Right; the Vertical options Top, Center and Bottom. The diagrams accompanying the selections provide a graphic depiction of the result you'll get with each selection.

- To center the text in the square, for both Horizontal and Vertical click on the Center button. Then click on OK.

The text string is now centered inside the square.

CorelDRAW aligns the first object selected to the second. As a result, it moved the square which you selected first, to the text which you selected last.



Aligning multiple objects

The align feature works with any number of objects, not just two, aligning all the objects to the last one selected.

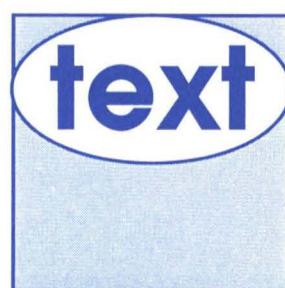
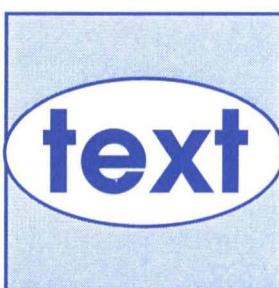
- To test this:

- Draw an ellipse
- Select the ellipse, text and square, keeping in mind that the first object you select will be aligned to the last
- Access the Align dialog box from the Arrange menu and, once again, center the objects by selecting Center for both Horizontal and Vertical, then clicking on OK.

All three objects are now centered. Assuming it was sized appropriately, the ellipse is centered inside the square, and the text inside the ellipse.

To explore your alignment options, return to the Align dialog box and try various combinations of Horizontal and Vertical alignment selections.

Next you'll learn to fit text to a path.



Using the Align dialog box, you can determine the way objects line up with one another.

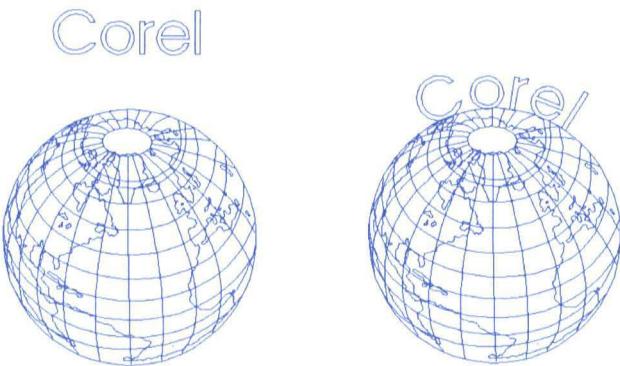
Exercise 7

(e) Fitting text to a path

Using the Fit Text to Path feature, you can align a text string along any line or curve, including a straight line, a freehand curve, a rectangle and an ellipse. To illustrate, in this part of the exercise you'll fit text to a circle.

1. To get started:

- Display a new page
- Draw a circle that runs almost the width of the printable page
- Add the word Corel anywhere on the page in about 100 point text.



*Using CorelDRAW's Fit Text to Path feature,
you can easily fit text to any object.*

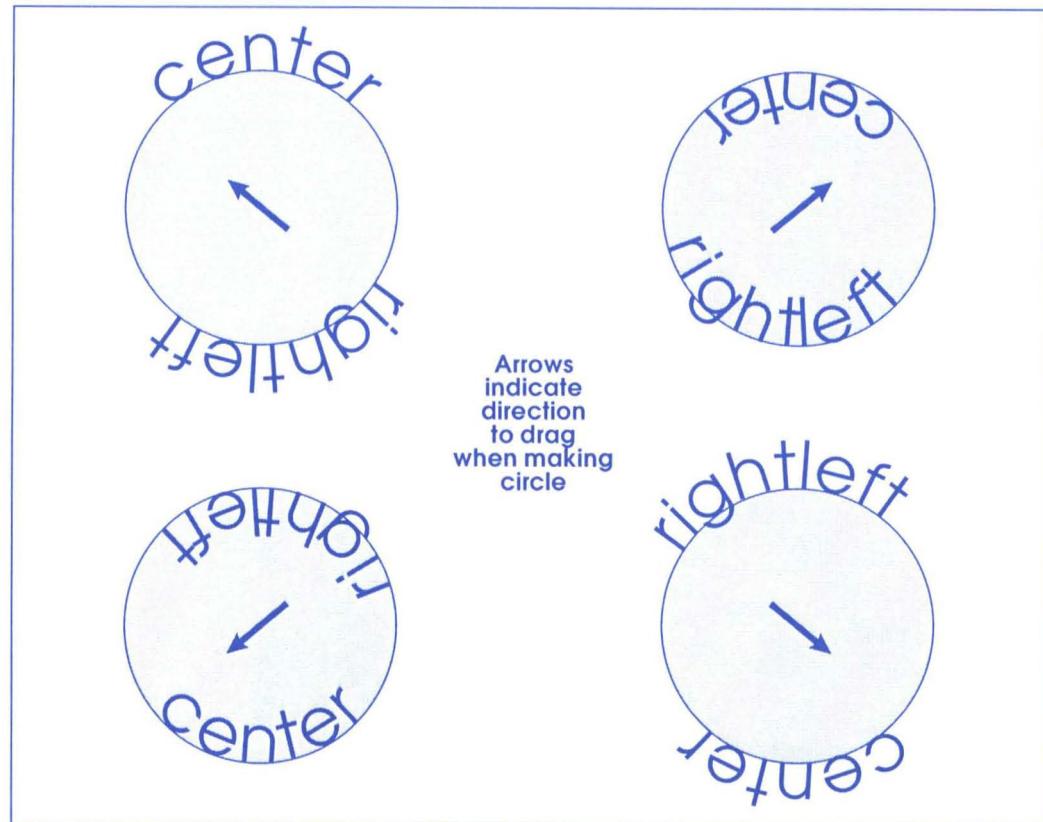
2. To fit the text to the path of the circle:

- Select both the text and the circle
- From the Menu bar, select Arrange
- From the Arrange menu, select Fit Text to Path.

The word Corel is now aligned along the outline of the circle. The exact alignment depends on the direction you dragged to draw the circle, and on the alignment option (left, center or right) you chose for the text. The graphic on the next page illustrates the results when you vary your dragging and alignment options.

Arrange	
To Front	ShiftPgUp
To Back	ShiftPgDn
Forward One	PgUp
Back One	PgDn
Reverse Order	
Group	^G
Ungroup	^U
Combine	^C
Break Apart	^K
Convert To Curves	^V
Align...	^A
Fit Text To Path	^F
Align To Baseline	^Z
Straighten Text	

Fit Text to Path is an
Arrange menu selection.



When fitting text to an object, the direction you drag to create the object, and the alignment option you choose for the text (left, center or right) determine how the text and object align.

Practicing fitting text to a path

Here are some suggestions for practicing fitting text to a path:

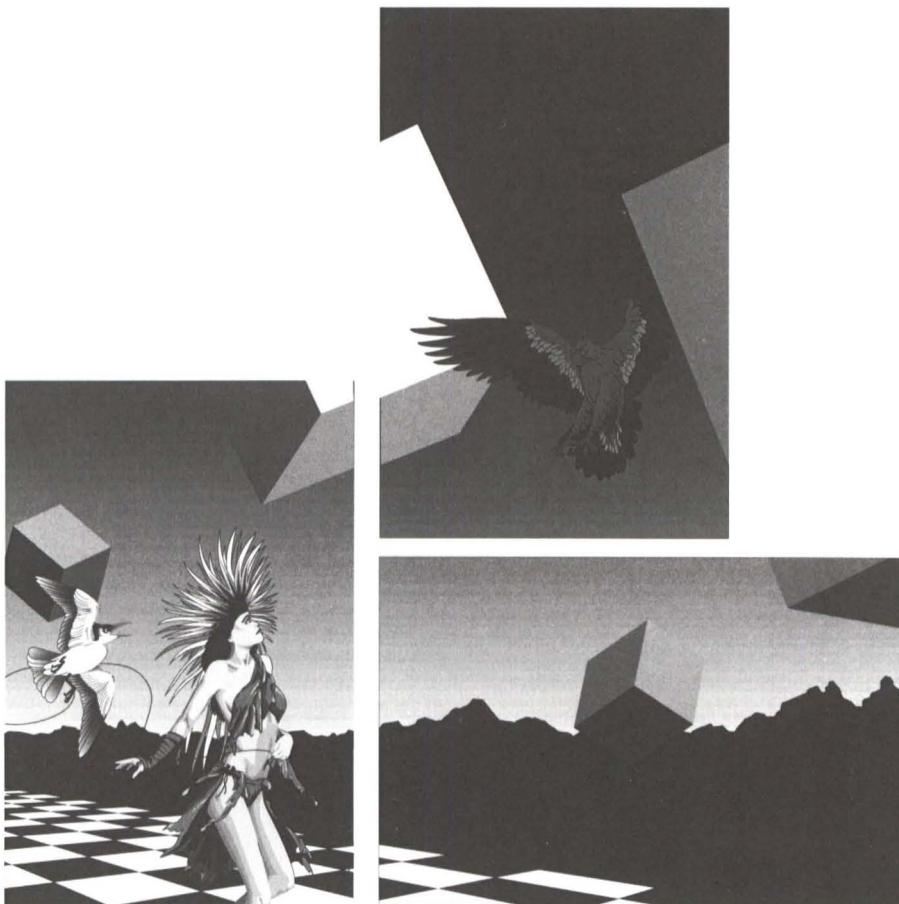
- Try the various options shown above to align the text differently along the circle
- Draw other objects — a freehand curve and a rectangle for example — and use the Fit Text to Path feature to see how text aligns along them.

Now that you've covered the basics of arranging objects, in the next lesson we'll look at file management.

Summary

In Lesson 7, you learned how to:

- Duplicate and delete objects.
- Move objects in front of and behind one another.
- Group and ungroup objects.
- Align objects.
- Fit text to a path.



Friday in the Park

Created with CorelDRAW by Alan Belcher, San Antonio, Texas, U.S.A.

8 Working with files

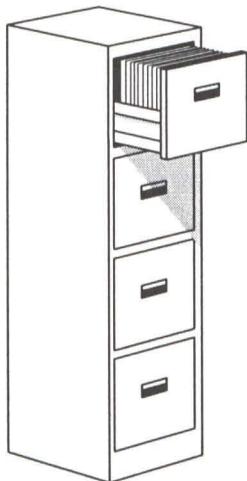
Introduction

Every drawing you create and save in CorelDRAW occupies its own file. Because CorelDRAW runs under Microsoft Windows, if you're familiar with file management in

Windows you already know much of what you need to know about working with files in CorelDRAW.

As a result, this lesson covers very quickly the basics of saving, opening and printing CorelDRAW files, importing files into CorelDRAW *from* other programs, and exporting CorelDRAW files *to* other programs.

If you find this introduction too basic, refer to the *CorelDRAW Technical Reference* for detailed information.



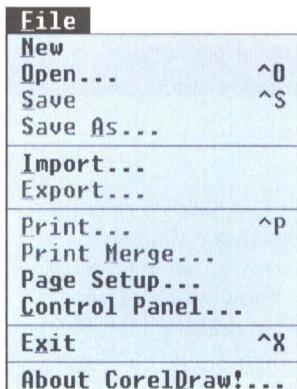
In CorelDRAW, each of your drawings occupies its own file.

Overview

In lesson 8, you'll:

- (a) Open an existing file, and save a new one.
- (b) Look over the dialog boxes for importing and exporting files.
- (c) Print a file.

Exercise 8



All file-management activities are performed using the *File* menu.

(a) Opening and saving files

The file management activities discussed in this lesson are performed using the File menu. So, to begin:

1. Display a new page. Then, from the Menu bar, select File.

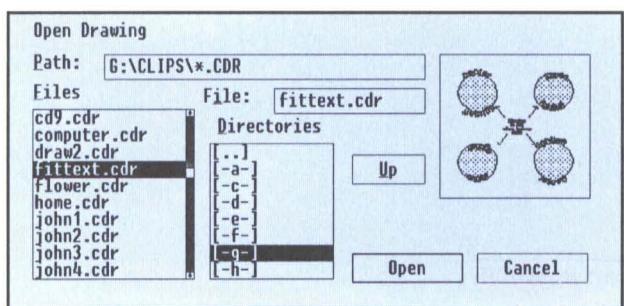
This menu should be familiar by now. In Lesson 1 you explored Page Setup. And you used the New selection throughout the lessons to display a new page when you needed one. Unless you possess amazing stamina and have worked through this tutorial without a break, you've also used Exit, or its shortcut (Control X), to leave CorelDRAW from time to time.

In this lesson we'll step through some of the remaining File menu selections so you'll have an idea what they provide.

Opening a file

Files are opened in CorelDRAW using the Open selection on the File menu. As a shortcut, you can select it directly from the CorelDRAW screen by holding down the Control key and pressing the letter O.

2. To access the Open Drawing dialog box, select Open from the File menu.



The Open Drawing dialog box displays the current directory Path, which you can change, a Directories list for choosing a path, and a list of files available in that path. The box in the upper right displays some of the contents of a file when you click on the file's name, provided the file was created or saved in the most recent version of CorelDRAW.

3. To preview the contents of some of the files available in CorelDRAW:
 - If it's not already displayed, change to the path containing .CDR files
 - Click on any filename to display a portion of its contents in the sample box.

4. If you want to open a file, double-click on the filename or click on the Open button. Otherwise, click on Cancel.

Saving a file

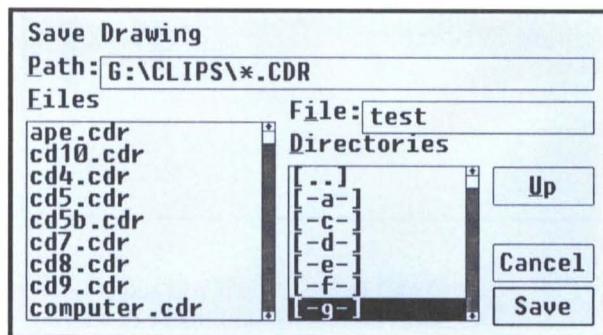
5. To start saving a file:

- If there is a file already open, display a new page by selecting New from the Edit menu
- To create contents for a file, draw one or more objects of any kind on your page
- Notice that the file name in the Title bar at the top of the screen is Untitled.CDR
- To use the shortcut for accessing the Save dialog box from the File menu, hold down the Control key and press the letter S.

The Save Drawing dialog box is similar to the Open Drawing box; there's a Path field, a list of existing files and directories, and a File field. The cursor is in the File field prompting you to enter a name for the file you want to save.

6. To complete the save:

- In the File field type in a name such as TEST (CorelDRAW will add the .CDR suffix automatically.)
- Click on Save or press the Enter key.



You've saved a file. The objects you drew are still displayed on the screen, but the file's name (TEST, or whatever you assigned it) is now displayed in the Title bar with the .CDR suffix.

When you're working with a drawing, it's a good idea to save it regularly. If you want to, using the 'Save as' selection on the File menu, you can save it under a new name and leave the original file intact.

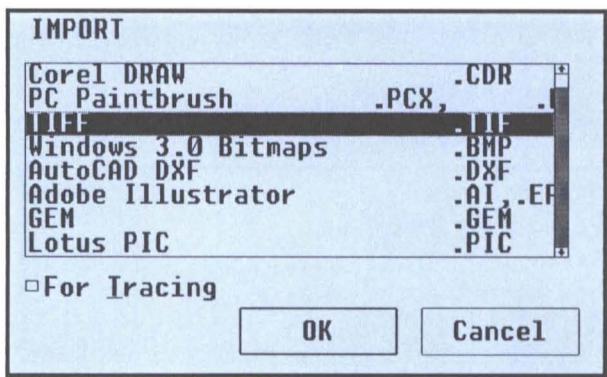
Exercise 8

(b) Importing and exporting files

You can import drawings into CorelDRAW from other programs using the File menu's Import selection. And you can convert a CorelDRAW file into a format usable by other software, such as word processing and page layout programs, using the Export selection.

Importing files

1. To begin a quick overview of the Import feature:
 - From the Menu bar, select File
 - From the File menu, select Import.



The Import dialog box lists the types of graphics files you can import into CorelDRAW. If you want to trace the file you're importing (as discussed in Lesson 1), and it's a PCX, TIFF or BMP file, then you select 'For Tracing'.

Notice that one of your import options is CorelDRAW. Using it you can import one CorelDRAW file, such as your company logo, into another, then size and shape it to your liking.

When you select a file type, such as CorelDRAW, or PC Paintbrush (.PCX), or Computer Graphics Metafile (CGM), then click on OK, you access a second dialog box.

2. To access the Import Bitmap dialog box, in the Import dialog box double-click on TIFF.

The Import Bitmap dialog box, like the Open Drawing dialog box you encountered in part (a) of this exercise, lets you specify the Path of the file you want to import, and the file's name. Once you've done that, you click on OK and the file is imported into CorelDRAW.

3. We won't import a file at this time (although you can try it if you want to), so after you've looked over the Import Bitmap dialog box, click on Cancel.

Exporting files

4. To explore the Export dialog box:

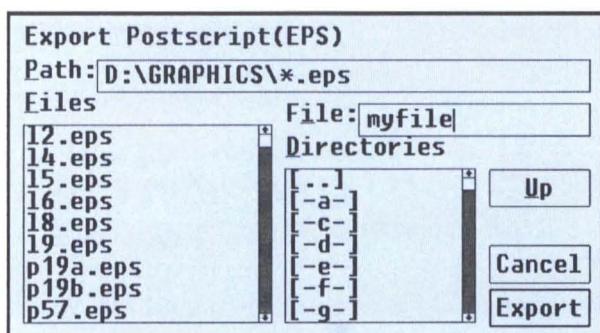
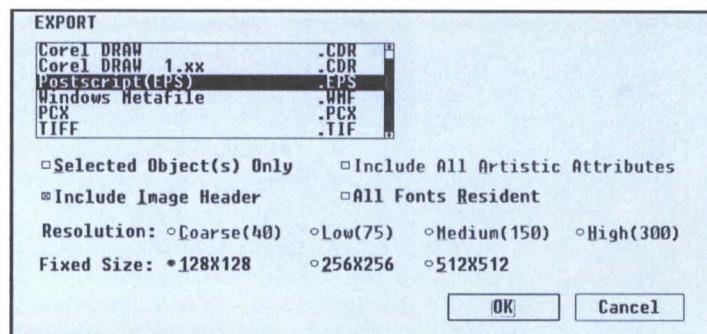
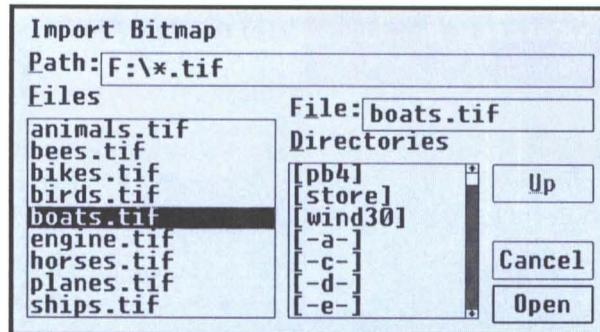
- If for some reason your file isn't still open from part (a), draw an object on your screen
- From the File menu, select Export.

The Export dialog box lists the various formats in which you can export your CorelDRAW file. And it provides a range of options for specifying exactly what you want to include in the exported file. It also lets you determine the resolution of exported bitmaps, along with the size of the Image Header you're exporting. These features are described in detail in the *Technical Reference*.

6. To select Encapsulated PostScript as the export format for your file, click on Postscript (EPS), then on OK.

Using the dialog box on your screen now, you can specify the name of the file you want created, and its location.

7. We won't export a file right now, so once you've looked over this dialog box click on Cancel.



Next you'll print a file.

Exercise 8

(c) Printing files

As an introduction to printing CorelDRAW files, you can print the file TEST.CDR that you created earlier.

1. Your TEST file should still be open from part (a) of this exercise. If it isn't, open it now. Or, open any other CorelDRAW file that you want to print.
2. To access the Print Options dialog box:
 - From the Menu bar, select File
 - From the File menu, select Print.

Using Print Options

The Print Options dialog box is used to print files. It has a wide variety of settings to choose from. They allow you to specify, among other things:

- Exactly what you want to print (the whole file, for example, or only objects you've selected)
- Whether you want to fit your drawing to the page or print it at its actual size
- Whether or not you want crop marks printed.

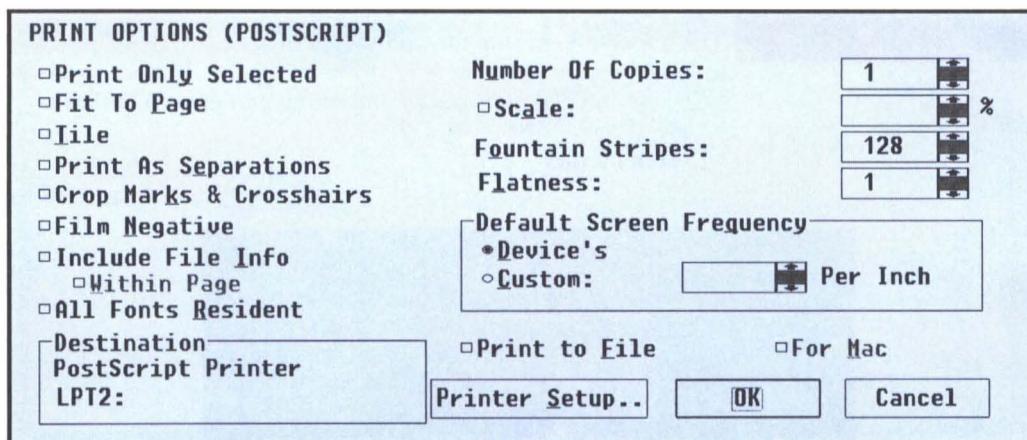
The Destination box at the bottom left describes the printer to which the file will be sent. And the Printer Setup button to its right accesses windows for specifying a different printer, changing the paper source, describing your page orientation (portrait or landscape) and so on.

If you have questions about how your printer will work with CorelDRAW, or you have problems printing, refer to the *Technical Reference*.

3. For now, to print your file, click on OK.

You've sent your file to the printer, and it should soon be available in hard copy form.

You've also just about finished this tutorial. In the final chapter we'll give you a quick overview of some features you didn't encounter during the lessons.



The Print Options dialog box is used to change Print selections and to print files from CorelDRAW.

Summary

In Lesson 8, you learned how to:

- Open an existing file and save a new one.
- Use the dialog boxes for importing and exporting files.
- Print a file.



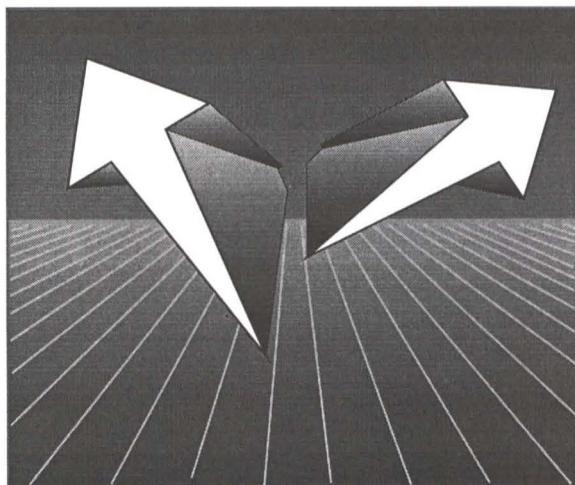
Self Portrait

Created with CorelDRAW by Susan Krupp, Toronto, Ontario, Canada

Where to now?

Introduction

If you've reached here by working through the lessons, with or without the help of the Tutorial video, then you've taken an important first step toward mastering CorelDRAW.



During the lessons you used each of the nine Toolbox tools, and most of the selections in five of the seven CorelDRAW menus. The menus you didn't use, or touched on only briefly, are Effects and Special.

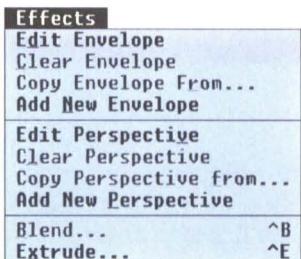
In this final chapter, so you'll know what they offer, we'll take a look at the Effects and Special menus. We'll also suggest ways to review, consolidate and build upon the CorelDRAW skills you've developed.

Overview

In this chapter you'll:

- Take a quick look at features not included in *Learning CorelDRAW's* lessons.
- Learn where to go from here in your quest to master CorelDRAW.

Where to now?



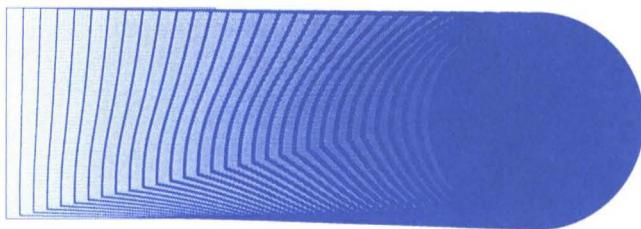
(a) Other features to explore

1. To begin this overview, select the Effects menu from the Menu bar.

Effects menu features

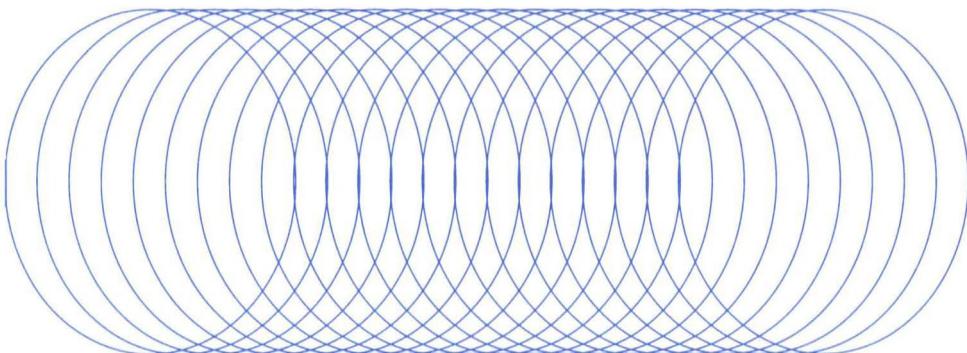
Using the first four selections on the Effects menu — Edit Envelope, Clear Envelope, Copy Envelope From and Add New Envelope — you can alter the shape of objects by applying ‘envelopes’ to them, then shaping them with the tool. This provides added flexibility when it comes to advanced object shaping.

You can also change the perspective of objects using Edit Perspective, Clear Perspective, Copy Perspective from and Add New Perspective on the Effects menu.



Using Blend, you can blend two objects; merging them gradually into one. CorelDRAW automatically creates intermediate shapes and colors between the two original objects. In the example here, a gray square and black circle have been blended.

If the original objects are identical, as in the example below, CorelDRAW creates an array of identical objects between the originals. You can specify the number of intermediary objects that you want.





Finally, the Extrude option automatically creates three-dimensional effects, like the ones above, that you'd otherwise have to create manually.

Special menu features

2. Next, from the Menu bar select the Special menu.

Using this menu's first two selections, Extract and Merge-Back, you can remove all the text from a CorelDRAW file into a word processor file. You can edit the text there, then reload it into CorelDRAW using Merge Back. It's useful for translating text from one language to another.

Special
Extract...
Merge-Back...
Create Pattern...
Create Arrow...
Preferences... ^J

Using the Create Pattern and Create Arrow features, you can create custom pattern fills for objects, and custom arrow shapes for the ends of lines.

Finally, the Preferences selection provides access to several dialog boxes for setting a variety of options. You encountered the Lines and Curves dialog box in Lesson 2, and the Place Duplicate dialog box in Lesson 7. The others include options for converting your cursor to a cross-hair, establishing borders on your screen, setting Print and Preview options, changing the Draw mode, and assigning a function to the right mouse button.

(b) The next step

Now that you've made a start, here are some suggestions for continuing your quest to master CorelDRAW:

Keep this book and the video handy

Once you've completed this tutorial, the natural tendency is to put it aside and forget about it. But we've structured it in such a way that you can easily find a topic you want to review, and quickly reacquaint yourself with its basics.

So keep it handy. And refer to it from time to time for basic information. At the very least, it can pinpoint features you want to research further using the *CorelDRAW User's Manual* or other materials.

And don't forget that the CorelDRAW video provides a visual demonstration of CorelDRAW's features. View it a second or even third time, and you'll find yourself picking up useful information you missed the first time through.

Use the User's Manual

Version 1.0 of the *CorelDRAW User's Manual* was very highly rated by reviewers and users. We think Version 2.0 is even better. Unlike most reference guides, it can be read cover-to-cover with positive results.

Familiarizing yourself with the manual can save you time and frustration by answering questions before they arise, and pointing out shortcuts that can save you valuable time.

Other learning and reference materials that come with CorelDRAW are listed in the *Read This First* booklet.

Build a third-party library

CorelDRAW's popularity has spawned a number of third-party books. Some are excellent. Each offers something to add to your storehouse of CorelDRAW knowledge. Check them out when you're browsing in your favorite bookstore. And consider building a CorelDRAW library that will add to your reference alternatives.

Call us

The Hotline Bulletin Board at COREL is covered with notes from grateful clients who have taken advantage of our free Hotline service. If you are experiencing difficulties with CorelDRAW, refer to the *Read This First* booklet for information about COREL Customer Services.

Help us to help you

In our efforts to help you get the most from CorelDRAW, we are constantly looking for new and better ways to document it.

One suggestion is an Ideas and Applications Guide that will describe interesting uses for CorelDRAW. If you have an unusual application, or you've developed a particular effect you think should be documented, let us know. Send us the details and we'll include them, with due credit to you of course, in future CorelDRAW learning material. Address your letter to:

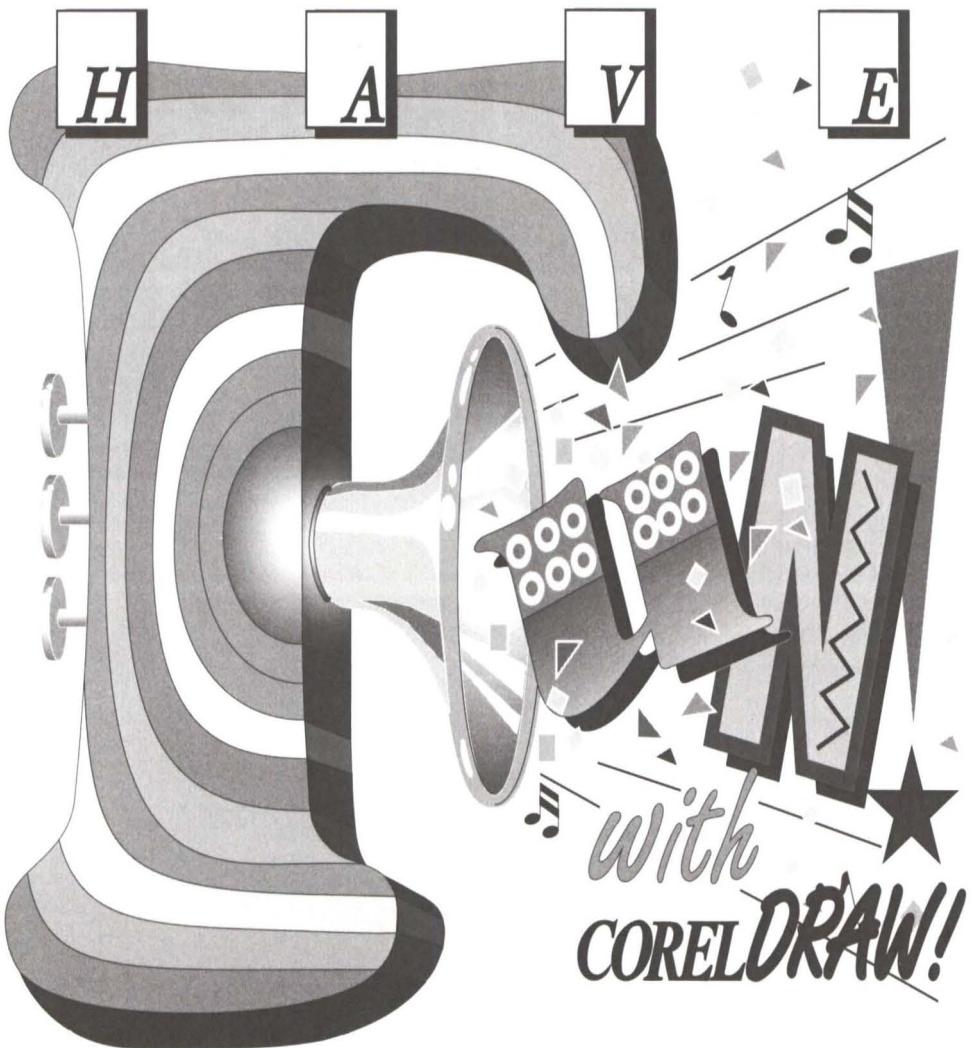
CorelDRAW Product Manager,
COREL Systems Corporation,
1600 Carling Avenue, Ottawa, Ontario, Canada
K1Z 8R7

Fax: (613) 728-9790

Have fun with CorelDRAW!

We've emphasized throughout this book, and we'll say it again: To master CorelDRAW there's no substitute for experimenting. To get the most out of CorelDRAW, to put its powerful tools to their most effective use, unleash your own creative imagination. And have fun!





Designed by G. Freshman 1989

Have Fun with CorelDRAW!
Created with CorelDRAW by George Freshman, Hallandale, U.S.A.

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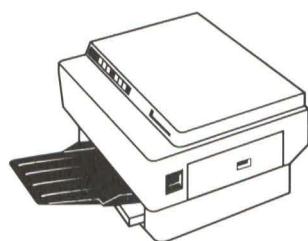


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CORELDRAW!



TECHNICAL
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CorelDRAW Technical Reference, Version 2.0

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Technical Reference - Release 2.0

Thank you for purchasing CorelDRAW, the world's finest PC illustration package. This Technical Reference provides additional information not found in the User's Manual.

The first three sections deal with interfacing CorelDRAW and other programs used in graphics and desktop publishing. Use of the Windows Clipboard and a variety of file format conversions are covered.

Following this are two sections providing information related to various software and hardware issues. A section then details some tips and hints to help you produce high-quality work.

A final section summarizes the history of program changes since the initial release of CorelDRAW. You should read this section carefully, especially if you are upgrading from a previous version of the program.

Please Note Carefully:

This version of CorelDRAW will operate only under Windows 3.0.

See the CorelDRAW Version 2.0 Read This First sheet for any late-breaking news or operating information.

New Features

This release of CorelDRAW represents a major effort by many people to bring you a product we feel is truly exciting. Whether you are new to the world of CorelDRAW or an experienced user, you are about to embark on a journey that can lead you along unexplored creative avenues. Many of the features we have added are in response to *your* requests and will give you access to entirely new ways of expressing your imagination. The following is only a brief list of some of the major improvements. For a more in-depth listing, consult the *History of Program Changes to CorelDRAW - Version 2.0* in this guide. The various manuals, guides and tutorial workbook included with this release of CorelDRAW explain the features in detail.

From all of us at **COREL** Enjoy!

Special Effects

- **Non-linear transformations:** apply "envelopes" to objects to mold and shape them in surprising and sometimes, unpredictable ways
- **Extrude:** 3-D effects generator
- **Perspective & Vanishing Point generation:** for realistic 3-D representations
- **Blend:** a method of transforming one object into another, while showing the transformation steps in between
- **Bitmap and Vector Fills:** create your own customized fill patterns from bitmapped or vector images

Text Features

- **Corel Symbol & Typeface Export:** create and edit your own typefaces and symbol libraries
- **Text extraction & merge back:** allows you to extract text from your drawing, edit it with a word-processor, and place it back into the drawing at its original location; useful for translations. Print merging makes personalized forms applications a snap
- **Bulk text import:** bring in paragraph text from your word-processor and set it up with justification in columns
- **51 new typestyles:** we've added some very special ones here
- **Fit text to shape:** molds your letters to fit within any shape
- **Internal font rasterizer:** gives better looking type from non-PostScript printers

Enhanced Program Operations

- **Color Models:** now you can specify colors using the RGB and HSB models, as well as create and name your own custom colors for ongoing use
- **Color Palettes:** on-screen programmable color selection, with variable screen models
- **Full Screen Preview:** use your entire screen to view your work
- **Two modes of drawing:** choose between freehand and Bézier modes
- **Enhanced printing operations:** overprints & trap
- **Nudge function:** ability to move objects in small, precise increments
- **"Move to" function:** move objects to precise locations anywhere on your drawing
- **Programmable mouse button:** choose from a list of functions
- **Node Handling:** precise placement and alignment of nodes now possible
- **Interruptible redraw:** speeds up your work
- **Curve flattening:** allows you to work and print in "draft" mode
- **Dotted and dashed lines:** new variety, with the ability to create your own styles
- **Arrowheads:** new variety, including the ability to create your own types
- **Guidelines:** allows you to bring guidelines down onto your page for precision work. Use these in conjunction with the *Snap to Guidelines* command
- **Adjustable rulers:** allows you to set your origin anywhere on the page
- **Onscreen Grid:** a programmable visual alignment aid. Use this in conjunction with the *Snap to Grid* command
- **Cursors:** now you can use a crosshairs cursor
- **Visual file selection:** allows you to "see" a drawing's contents before opening it
- **Auto Back-up:** now you can activate an automatic, timed back-up of your work
- **About box:** provides # of objects, # of groups and disk space counters
- **Edge Padding:** for improved fountain fills in irregularly-shaped objects
- **Radial Offsets in fountain fills:** for directional "lighting" control
- **Stretch & Scale:** now you can do this from an object's center

Clipart and Symbols

- **Clipart:** over 750 clipart samples in 14 categories.
- **Symbol Libraries:** over 3000 symbols in 36 categories. Visual selector provided
- **Customized symbol creation:** use CorelDRAW to create your own symbol libraries

Related Programs

- **MOSAIC:** a new utility that works with CorelDRAW; it is a visual file manager which lets you see and perform operations on whole directories of CorelDRAW files
- **CorelTRACE:** now you can trace color bitmaps and have the program fill the traced image with those colors
- **WFN BOSS:** Adobe Type 1 export added to create downloadable PostScript fonts. This can be used with the customized typefaces you can now create in CorelDRAW

CorelDRAW! Connectivity to the Outside World

Since the initial release of CorelDRAW, we have greatly expanded the program's connectivity with other popular graphics formats. This allows you to interface with most of the current PC-based software packages employed in graphics design and desktop publishing. This Technical Reference describes the various file formats that CorelDRAW connects with.

The first mode of connectivity covered deals with the use of the Windows *Clipboard*, which lets you transfer files in and out of many popular Windows-based programs. The next section provides information on how to *Import*, or bring files created in other formats, into CorelDRAW. The section after that deals with the opposite situation, namely, how to *Export* files from CorelDRAW to other formats.

NOTE: Throughout these sections, the term "*filter*" is used to describe the program function responsible for converting (importing & exporting) files to different formats. For instance, the GEM Import filter is that part of the program which converts GEM-type files into CorelDRAW's own CDR file format.

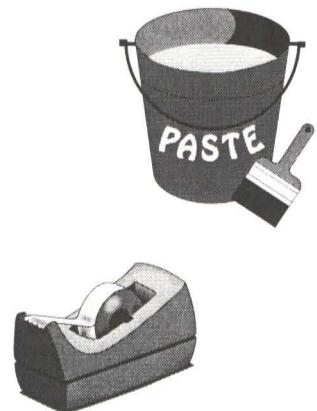
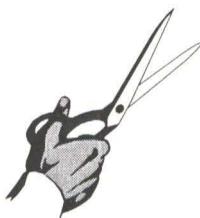
Clipboard Support

CorelDRAW supports the Windows *Clipboard*. This allows you to link CorelDRAW with many popular Windows packages, such as:

- Arts & Letters
- Excel
- Micrografx Designer
- Micrografx Graph Plus
- Pagemaker
- PC Paintbrush for Windows
- Pixie
- Samna Amí
- Scan Gallery
- other Windows packages offering clipboard support

Even more importantly, you can use the clipboard to transfer objects between different CorelDRAW files.

General



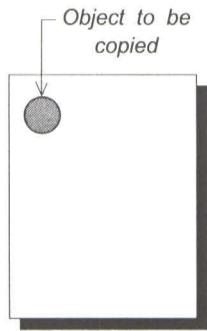
Copy & Cut

Use of the clipboard in CorelDRAW is very straightforward. Simply select the object(s) you wish to place on the clipboard with the  tool and then click on either *Copy* or *Cut* in the Edit menu. Using *Copy* places the object on the clipboard while leaving the current drawing unchanged. *Cut* also places the object(s) on the clipboard and will then remove it (them) from the current drawing. If the objects you wish to place on the clipboard exceed the CD_CORELDRW limit of 64 kilobytes, you will be given the warning:

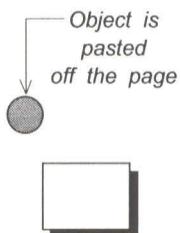
"CorelDRAW Clipboard format too large to put on Clipboard"

Click on *OK* to return to your drawing. Note that in most circumstances (unless it is very complex), the object **will** in fact have been Copied into the clipboard using Window's Metafile format. As such, it is available to be Pasted, but only into another application capable of pasting Metafiles in excess of 64 kilobytes.

Operation of the Clipboard



FILE 1
(Page size = 8.5" x 11")



FILE 2
(Page size = 4" x 3")

Copying and Cutting

Paste

To paste an object from the clipboard into your drawing, the **P** tool must be active. You then simply click on *Paste* in the Edit menu. If an object was copied from another CorelDRAW file, it is pasted into the current drawing at the same size as the original. It will also be at the same distance and orientation from the center of the working page. If the page size and/or orientation of the two files is different, this can lead to the object being pasted *off* the working page. For example, if you copy an object from the top left-hand corner of a file on an 8.5" by 11" portrait page and then paste it to a 4" by 3" landscape page, the pasted object may not appear on the smaller page. Click on the **Q** tool and select *All*. You will then see the pasted object and can move and scale it as desired.

If an object was placed into the clipboard from another application, it will usually come in centered on your CorelDRAW page, regardless of the page size. If you do not see it, or it exceeds the boundaries of your working page, then click on the **Q** tool and select *All*. Move and scale the object as required. If it is too large or complex to paste into CorelDRAW, this message appears:

"Object too complex, exceeds 64 Kbytes."

Click on *OK* to return to your drawing.

Allowable Formats into the Clipboard

CorelDRAW currently allows two formats to be *Copied* to the clipboard:

- CF_CORELDRAW (the CorelDRAW format, which also supports bitmaps)
- Windows Metafile

General Copying Limitations

Objects containing the following effects can **not** be *Copied* to the clipboard from CorelDRAW:

- PostScript fills
- Bitmap fills
- Vector fills
- Most radial fountain fills (whether or not these can be successfully Copied depends on the complexity of the object containing them)

Copying Objects from CorelDRAW

Certain programs have been tested in conjunction with CorelDRAW's use of the clipboard. The following limitations have been discovered with objects *Copied* to the clipboard from CorelDRAW and then *Pasted* into other applications.

Arts & Letters

- Groups of objects copied up to the clipboard and pasted into A&L come across as a "Picture" which cannot be ungrouped.

Micrografx Designer

- Text does not come across as text, and shows construction lines.
- Fountain fills usually fill the entire bounding box of an object instead of just the object.
- Ellipses come across as four connected quadrant curves, which in turn are actually line segments.
- A filled shape copied from CorelDRAW is pasted into MD as two objects. One is only the outline and the other is the fill. If the original outline was thick, that outline may come in as a one group of objects.

Allowable Formats from the Clipboard

The following formats may be *Pasted* from the clipboard into a CorelDRAW drawing:

Pasting

- CF_CORELDRAW (including monochrome bitmaps)
- Windows Metafile
- ASCII text
- Bitmaps

General Pasting Limitations

Certain limitations exist on the use of the clipboard with objects from other packages. Specifically, the following Windows Metafile features *Copied* to the clipboard from other programs can **not** be *Pasted* into CorelDRAW:

- Background commands (ie/ SetBkMode, SetBkColor)
- Special text kerning or rotation
- Pattern fills (only uniform fills are currently supported)

- Clipping regions
- Flood fills
- Individual pixel manipulations
- No ROP2 modes, other than R2_COPYPEN (ie/ no combining of pen colors)
- WINDING polygon fill mode (ALTERNATE mode is supported)

When pasting text from another application such as Windows Notepad or Write, that text will come into CorelDRAW assigned with the current text defaults (typeface, size, outline & color). Spacing options are always assigned the opening defaults. Any of these parameters can then be changed as required.

Please note also that when Pasting text from another application, the **text string is limited to 250 characters maximum**. If you need to transfer more than this, then perform the Cut & Paste operation in a series of blocks, where each block of text is less than 250 characters. If a text string exceeding the limit has been copied to the clipboard and you try to paste it into CorelDRAW, it will be truncated after 250 characters. You will receive a warning that this has occurred.

Pasting Objects into CorelDRAW

The following specific limitations have been discovered when trying to *Copy* objects to the clipboard from other applications and then *Paste* them into CorelDRAW.

Arts & Letters

- No bitmaps to the clipboard are supported from A&L.
- Text placed into the clipboard from A&L comes into CorelDRAW as curves, although the font outline appearance is preserved.
- A filled shape created in A&L will come across as two objects, one consisting of only the outline and the other of the fill. These may then be grouped in CorelDRAW.
- Pattern fills placed into the clipboard from A&L usually come into CorelDRAW as solids. These are of the last color that was active in A&L.
- Circles and ellipses come into CorelDRAW as connected line segments.

Micrografx Designer

- No bitmaps to the clipboard are supported from MD.
- Most text placed into the clipboard from MD will come across into CorelDRAW as text, but each line of text will be an individual text object. Kerning may also be way off. These objects can be grouped, but this will not turn them into a single, editable string. Using *Combine* on these individual letters converts them to curves.
- Curves pasted from the clipboard into CorelDRAW are converted to line segments.
- Outlines usually come across with the correct thickness and are always black.
- Fountain fills and hatching come across as solids. These have the same color as the last color that was active in MD.
- Rotated text will come across as such, but the individual letters are backwards and mirrored.
- Circles and ellipses drawn with heavy outlines will appear with ragged outlines when pasted into CorelDRAW. Select the object and set its corners to rounded. This will improve the situation, but it may still appear quite rough.

Other limitations may also exist with the large number of available Windows programs. We would appreciate knowing of any difficulties you have with any of your particular software. This will help us to improve the flexibility of the clipboard support in the future.

An interesting, albeit indirect, use of the clipboard is available through the Windows screen capture facility. Anytime you're running a Windows 3.0 application such as CorelDRAW, you can press the Alt key followed by the Print Screen key. This causes a bitmapped representation of your entire screen to be placed into the clipboard. You can then go into Windows Paintbrush to paste the image into that program. Before pasting it though, adjust your view to Zoom Out, otherwise part of the captured image will be clipped off. Once in Zoom Out, click on Paste and the contents of the clipboard will appear. You can then modify this "screen shot" using the Paintbrush tools and save it as a BMP or PCX file. This file can then be imported for use in CorelDRAW.

Windows Screen Capture

Importing Graphics Files from Other Software Packages

The *Import* command under CorelDRAW's FILE menu allows you to bring in or "import" graphics to your drawing that were created by other software packages. The wide variety of "import filters" that have been developed enable you to link CorelDRAW with scanner outputs, drawing files from other illustration programs, business graphics applications and more. Once a file has been imported, you can then use CorelDRAW's powerful drawing and text tools to embellish it. The file can then be saved in CorelDRAW's own format, CDR, or "exported" to other formats for use in other programs. The *Export* function is covered in detail further on in this reference guide.

Since different graphics formats have their own, unique way of handling the information they contain, it is sometimes difficult to *precisely* translate the contents of one format to another. One format may not be capable of recording the same functions and special effects applied to an object as another format. And some formats are intrinsically *very* different than others; bitmaps versus vector files being a prime example.

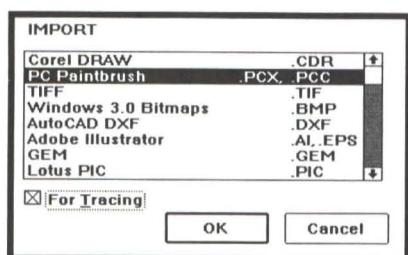
In all cases, we have tried to provide as accurate a translation between formats as is possible. You will, however, notice the differences once you start using the filters. The following pages detail some of the variations you can expect when importing files into CorelDRAW.

Import filters available in CorelDRAW include the following bitmap and vector formats:

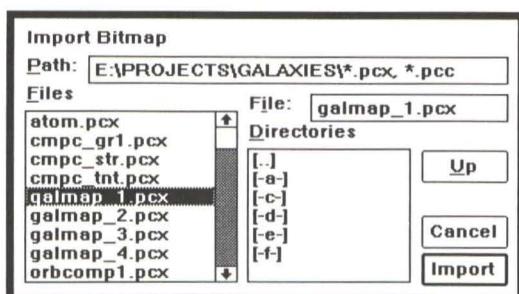
- Adobe Illustrator (.AI, .EPS)
- AutoCAD DXF (.DXF)
- CorelDRAW (.CDR)
- CorelTRACE (.EPS)
- GEM (.GEM)

- Graphics Metafile (.CGM)
- HPGL (.PLT)
- IBM PIF (GDF) (.PIF)
- Lotus 1-2-3 (.PIC)
- Mac PICT (.PCT)
- PCX (.PCX)
- TIFF (.TIF)
- Windows 3.0 Bitmaps (.BMP)

When you select the *Import* command from CorelDRAW's FILE menu, the following dialog box appears:



Choose the format you want from the list. After making your choice, you will be presented with the file selection menu:



This dialog box operates identically to the one for file selection described in the main User's manual for the *Open* command. Depending on your choice of filter, CorelDRAW automatically displays filenames with the extension shown in brackets beside the filter's name. You can change this, if for example your PCX files are stored with a .PCC extension.

Note that the *For Tracing* option in the first dialog box is only active for the three bitmap import formats; BMP, PCX and TIF. It is discussed in detail in the main User's manual.

The table below is a guide to the graphics formats used in other popular programs and capable of being converted and imported by CorelDRAW. *This is intended to serve as a guide only.* We are constantly testing other programs in conjunction with CorelDRAW, and would like to hear any suggestions or comments you would like to pass on concerning these or other programs. Contact us via our Technical Support Group.

Refer also to the *Clipboard* section in this guide as a means of transferring information between CorelDRAW and other applications that run under Windows.

Recommended formats for importing graphics files into CorelDRAW from other popular software packages:

<i>Program</i>	<i>Recommended graphic import format:</i>
Adobe Illustrator	AI (EPS)
Arts & Letters	AI (EPS), Clipboard
AutoCAD	DXF, HPGL (PLT files)
ASCII text	Clipboard and paragraph-text import
CorelDRAW	CDR, Clipboard
CorelTRACE	CorelTRACE EPS
Excel (Graphs)	Clipboard
GEM Artline	GEM
GEM Graph	GEM
GEM Draw Plus	GEM
Harvard Graphics	CGM (see also notes on Third-party Connectivity)
Lotus 1-2-3	Lotus PIC or Lotus CGM (more recent versions)
Lotus Freelance Plus	CGM
MAC-based vector packages	MAC PICT, AI
Micrografx Designer, Graph Plus	Clipboard
PC Paintbrush	PCX
Scan Gallery	TIF

CorelDRAW Format

CorelDRAW allows you to merge one or more CDR files by permitting you to import (as opposed to "open") the program's own format, .CDR. This can be handy for things like adding logos to a drawing, or splitting up large, complex files into more workable pieces. When each of the pieces are finished, you can then bring them all back together by importing one after another.

You import other CorelDRAW files into your current CDR file by choosing the "**CorelDRAW .CDR**" line from the *Import* dialog box. You will then be prompted for directory containing the desired file. Once this is specified, double-click on the filename or select the file and click on the *Open* button.

Imported CorelDRAW files appear as a *group* of objects. You may manipulate them the way you would any other objects in the picture. Use the *Ungroup* command if you want to manipulate individual objects in the imported graphic.

Since CDR files are CorelDRAW's native format, there are obviously no limitations or alterations to the contents of such a file on import.

Importing CDR files

Limitations

AutoCAD DXF Format

CorelDRAW now allows the import of AutoCAD Data Exchange File (DXF) format images. The following guidelines and limitations should be observed.

Preparing the file in AutoCAD

To create a DXF file from AutoCAD, use the DXFOUT utility while in that program. If the image is 3D, save it with the view that you want to transfer over to CorelDRAW.

Importing DXF files to CorelDRAW

The DXF file is imported into CorelDRAW by selecting the *Import* option under the main *File* menu. When the dialog box appears, use the scroll bars to read the list of available import formats and select the "**AutoCAD DXF .DXF**" line. The directory and DXF filename may then be specified.

General notes and limitations on imported DXF files

Please note the following when importing DXF files into CorelDRAW:

- An effort is made to place the imported image within a 12"x12" area centered on the CorelDRAW working page. However, this is cannot be guaranteed, especially in the case of 3D images.
- Some precision within the drawing may be lost.
- For colors beyond the standard seven, an effort is made to match the 256 colour scheme AutoCAD uses for the IBM Professional Graphics Controller.
- Objects that are invisible in Autocad are imported with no outline or fill. Such objects will appear on the CorelDRAW working screen, but not on the preview screen.
- If a line in the DXF file has any dashed pattern, it will be given CorelDRAW's first dashed line pattern. This may subsequently be changed to any of the other dashed lines available in CorelDRAW.

- If you experience a problem with the scattering of dimensions in your imported file, go back to your original drawing in Autocad and explode the dimension before creating the DXF file.
- The line width of a polyline is imported as the **minimum** line width that polyline had in AutoCAD. The maximum width the line can have is 4 inches. Variable line width information is not retained when the file is imported.
- Solids and traces are filled if the view point is on the z-axis.
- A point is imported as an ellipse of minimum size. An extruded point is imported as a line segment with two nodes. PDMODE is not considered.

Text generated in AutoCAD and imported via DXF will show the following differences:

Text

- Text may be stretched in CorelDRAW in an effort to preserve the physical length of text in the original image. However this may not always be possible, especially if the text was left justified.
- CorelDRAW has limits on values for text point size and skew. If the AutoCAD text object exceeds these limits, then the object is brought within the limits when it is imported.

Regarding special characters in text strings:

- Control characters are ignored.
- Overscore and underscore indicators are ignored.
- If a character is referred to by number, the number must be three digits. i.e. character 65 is %%065.
- %%010 is considered to be a carriage return and line feed.
- Any non-standard characters become a "?" in CorelDRAW, including: the degrees symbol, the +/- tolerance symbol, and the circle dimensioning symbol.

An attempt is made during import to match typefaces used in AutoCAD with the closest available face in CorelDRAW. The following table is a guide to the matches made:

<i>DXF typeface:</i>	<i>CorelDRAW typeface:</i>	<i>Similar to:</i>
Standard	Toronto	Times
Roman	Toronto	Times
Script	Banff	Brush Script
Greek	Symbols	Greek/Math Symbols
Italic	Toronto	Times-Italic
Simplex	Toronto	Times
Complex	Toronto	Times
Sympa	Geographic	Carta
Symusic	Musical	Sonata
(other)	Toronto	Times

AutoCAD features not supported in CorelDRAW

The following features in AutoCAD are not supported when importing a DXF file into CorelDRAW:

- Shape entities - CorelDRAW cannot read .SHX files
- Polylines including: variable-width polylines, elevation (group 38), mesh M and N vertex counts (groups 71 and 72), smooth surface M and N densities (groups 73 and 74) and smooth surface type (group 75)
- 3D extrusion of circles, arcs, and text
- 3D extrusion of polylines with width and/or dashed patterns
- 3D face entities - invisible lines
- Automatic wireframes
- Hidden lines removal
- Extrusion direction assumed to be parallel to the z-axis

Adobe Illustrator AI, EPS Format

The Adobe Illustrator AI (EPS) format can also be imported to CorelDRAW. The primary purpose of this filter is to provide a link to IBM and MAC-based software packages capable of generating AI files. This also gives you access to a wide variety of clipart files available in this format. You can import these into your drawing and then modifying them using CorelDRAW's many tools.

To use this filter, click on *Import* under the main FILE menu and then select the "***Adobe Illustrator .AI, .EPS***" line from the dialog box. Use the file selection menu to specify the desired file name. CorelDRAW automatically converts the file into its own format and displays it as a group of objects. You may then manipulate them the way you would any other objects in the picture. Use the *Ungroup* command if you want to manipulate individual objects in the imported graphic.

Illustrator 88 has two formats available when saving a file; the native format (Illustrator 88) and AI 1.1. CorelDRAW fully supports the AI 1.1 format, but not all the features or functions of the native format.

The situation is somewhat different on *exporting* CorelDRAW files to the AI format, since there are features available in the CDR format that are not supported in AI. These are discussed in detail in the Export section of this guide.

Importing AI, EPS files

Limitations

Bitmap files: BMP, PCX and TIF Formats

There are three major bitmap formats supported by CorelDRAW: BMP, PCX and TIFF. Since these formats are similar to one another, and all are intrinsically different from CorelDRAW's vector format, they are grouped together here.

Bitmaps vs Vectors

One of the major differences between bitmapped and vector graphics is the issue of *resolution*. The resolution of bit-mapped graphics such as BMP, PCX or TIF files is dependent on the device or program which generated them. These files are built up as a number of rows of individual pixels, with a set number of pixels per row. On the other hand, vector-based (object-oriented) graphics formats like CorelDRAW are device *independent*, because all of their objects are described in terms of mathematical equations.

One of the results of this basic difference is the appearance of a graphic when you change its size. When such a file is imported, it comes in at "full-size". If you *increase* the size of the bitmapped graphic, it will become more "ragged", because the differences in pixels between adjacent rows and columns of the original object become amplified. If you *decrease* the size of the bitmap, you also risk losing picture information because the computer must decide which pixels to eliminate in order to "squeeze" the graphic into the new, smaller size. Be aware of these limitations if you intend to import and *scale* a bitmap in your drawing. A bitmap is still treated as a bitmap by CorelDRAW, even though the program itself is object-oriented. In contrast to this, scaling vector-based objects does not alter their overall appearance.

Importing bitmap files

A bitmap file is imported into CorelDRAW by selecting the *Import* option under the main FILE menu. When the dialog box appears, use the scroll bars to read the list of available import formats and select the format you want, one of:

"PC Paintbrush	.PCX, .PCC"
"TIFF	.TIF"
"Windows 3.0 Bitmaps	.BMP"

You will then be prompted for directory containing the desired file. Once this is specified, double-click on the filename or select the file and click on the *Open* button.

Note that the bitmap files will come into CorelDRAW's editing window shown as black rectangles with a grey or black fill. If you call the preview window, the contents of the bitmap will appear. Note also that *skewed* or *rotated* bitmaps can only be printed on PostScript printers.

PCX Bitmaps

These files are commonly generated through packages such as ZSoft's PC Paintbrush and a host of scanning packages. PCX files may either be in color or black & white, whereas most scanners produce only black & white files. (Upper-end scanners are also capable of producing grey-scale and color images.)

CorelDRAW will accept standard, single-bit black & white PCX files. It will also import color PCX files and will print them as such, provided you have a color printer. On a black & white printer, colors will be converted to shades of grey. Note that if you *save the bitmap as part of a CDR file*, the color information will be retained. However, *exported* PCX files *do not* contain color information.

BMP Bitmaps

These files are created by the Windows 3.0 Paintbrush program. They may be either color or black & white and will print accordingly, depending on your printer. As with the PCX format, if you have only a black & white printer, colors will be converted to shades of grey. This format does not support grey-scale information.

TIFF Bitmaps

CorelDRAW will accept the most common derivations of TIFF files including grey-scale bitmaps from HP's Scanning Gallery. Compressed TIFF files can also be imported. However, you may notice additional loading time, as CorelDRAW decodes the file compression. Some compression algorithms used to produce color TIFF files such may not allow successful importation of these file types.

Limitations

Computer Graphics Metafile (CGM) Format

CorelDRAW permits the import of Computer Graphics Metafile (CGM) format images. This gives you access to graphics created on other types of PC's, mini- and mainframe computers. With this format, you can read files produced using Harvard Graphics, Lotus Freelance Plus, Zenographics Mirage, Arts & Letters, Micrografx, ISSCO Displa and various other CAD and graphics packages. In addition, you can also import clipart libraries from manufacturers such as MGI and New Vision.

Since CGM is an object-oriented format, the files you import or export are resolution independent, device independent and retain their original color information.

Importing CGM Files

To import a CGM file, click on *Import* in the *File* menu and select the "**Graphics Metafile .CGM**" line from the list of formats. You will then be prompted for a source directory and filename. When these have been specified, click on *OK*.

Note the following when importing CGM files:

- 1) The imported file may exceed the printable page area of the screen once it comes in, or it may not be centered on that page. Click on the tool and select . When the screen has refreshed, you may then scale the image and bring it within the print boundary. Since CGM is a vector-based format, this operation will in no way degrade the image.
- 2) When importing CGM files containing text and created in most packages other than CorelDRAW, the text will be editable by selecting *Edit Text* from the *Edit* menu. However, if you create a drawing containing text in CorelDRAW, export it as CGM and then import it again later as CGM, the text will no longer be editable. This occurs because all text is converted to curves when CorelDRAW exports in the CGM format. For that reason, it is advisable to save your original work in the CDR format. You can then always edit your text at a later date in the CDR file and re-export it to CGM.

The following conditions and limitations are known to exist when importing CGM files created with other packages into CorelDRAW.

CGM Import Limitations

Harvard Graphics

- The extended IBM character set used in this package differs somewhat from the Windows one in CorelDRAW.
- Rectangles, ellipses and arrows come into CorelDRAW as curves. Circles however do come across as circles.
- A filled shape created in HG will come across into CorelDRAW as two objects, one consisting of only the outline and the other of the fill.
- If your HG file contains text, you will be asked when saving the file in that package whether or not you want to use the HG font. If you answer yes, the text that comes across into CorelDRAW will actually be curves. If you answer no to that question, the text that comes across into CorelDRAW will be editable text in CorelDRAW's default TORONTO typeface. You should therefore answer NO to that question, since most times you will probably want to edit text.

Freelance

- No bitmaps are supported from Freelance CGM into CorelDRAW.
- Hatching comes into CorelDRAW as solids. The color of the solid will be the same as the original hatching.
- The extended IBM character set used in this package differs somewhat from the Windows one in CorelDRAW.
- Text comes across as editable text, however fonts are not always correctly matched and no attribute information (ie/ Normal, Bold, etc.) is recognized. These can be specified in CorelDRAW.
- The colors created in Freelance and then imported into CorelDRAW via CGM behave in an odd way. *They depend on the printer specified during the Freelance installation.* For example, if a Laser Writer was specified, colours come across as greys. If a Paint Jet was specified, then the colors come across reasonably accurately.

- CorelDRAW's CGM filter only accepts markers supported by the CGM standard. Private-use markers are ignored.

Arts & Letters

- No bitmaps are supported from CGM into CorelDRAW.
- Text comes across as curves, not editable text.
- Rectangles come across as connected line segments.
- Circles and ellipses come across as curves.
- A filled shape created in A&L will come across as two objects, one consisting of only the outline and the other of the fill.
- Colored objects retain their color information.

Micrografx Designer

- No bitmaps are supported from CGM into CorelDRAW.
- Hatching and fountain fills come into CorelDRAW as solids.
- Colored objects retain their color information.
- Circles and ellipses come across as curves.

Other limitations with files created in various programs probably also exist. We would appreciate knowing of any difficulties you have with any of your particular software. This will help us to improve the flexibility of the CGM Import/Export filter in the future.

CorelTRACE Format

CorelDRAW allows the direct import of files created by the CorelTRACE utility. Traced files can then be refined using CorelDRAW's numerous features.

A CorelTRACE file is imported into CorelDRAW by selecting the *Import* option under the main *File* menu. When the dialog box appears, use the scroll bars to read the list of available import formats and select the "**CorelTRACE .EPS**" line. You will then be prompted for directory containing the desired EPS file. Once this is specified, double-click on the filename or select the file and click on the *Open* button.

Importing CorelTRACE files into CorelDRAW

The files you import from CorelTRACE have been converted from bitmapped format to vector format. As such, they consist of various outlines and/or closed paths.

Notes on CorelTRACE files

Once the file is imported to CorelDRAW, you may use any of the program's tools and functions to modify the image. These include editing the nodes, applying color fills and incorporating special effects such as fountain fills, PostScript textures and calligraphic pens.

Consult the CorelTRACE User's Guide for detailed information on these files.

GEM Format

CorelDRAW now also allows the import of images created in all packages producing .GEM files, such as GEM Draw, GEM Graph and GEM Artline.

The GEM filter will also allow you to import GEM files created by Ventura Publisher. This is particularly significant, since Ventura creates a GEM file whenever one of its supported vector file formats is loaded into a chapter. In other words, formats such as AutoCAD SLD, Lotus 1-2-3 PIC, Macintosh PCT and Hewlett-Packard's HPGL will all produce GEM files in Ventura Publisher. These GEM files can then be imported by CorelDRAW, giving you access to an even greater variety of drawing formats.

Importing GEM files to CorelDRAW

A GEM file is imported into CorelDRAW by selecting the *Import* option under the main *File* menu. When the dialog box appears, use the scroll bars to read the list of available import formats and select the "**GEM .GEM**" line. You will then be prompted for the directory and filename of the GEM file. Once this is specified, double-click on the filename or click on the *Open* button.

Limitations on imported GEM files

Colors

The GEM format only supports 16 standard colors and CorelDRAW's GEM import filter supports these. When your GEM file is brought into CorelDRAW, an attempt is made to match colors as closely as possible.

Object Interior Fills

Objects in GEM that have a solid or percentage fill of a particular color will also have a corresponding fill in CorelDRAW. However, the palette of custom fills (ie/ grids, hatches, ball bearings, etc.) used in the GEM programs is not supported when importing a file. Any objects containing such fills in GEM will have a tinted color fill in CorelDRAW, where the tint corresponds to the color of the pattern fill of the original GEM object.

Text

With the exception of GEM Artline, text in your GEM file will come into CorelDRAW as editable text. If your file was created in Artline, then your text string will come across as a curve. Typefaces correspond as follows:

<i>GEM typeface:</i>	<i>CorelDRAW typeface:</i>	<i>Similar to:</i>
Dutch	Toronto	Times
Swiss	Switzerland	Helvetica
System	Avalon	Avante Garde

When your file is imported, you may notice that text alignment does not quite agree with the original file. This is due to the differences in font sizes, inter-character and inter-word spacing between the two programs. Any such misalignment is easily corrected in CorelDRAW. In addition, if your GEM file contains keyboard characters not supported by CorelDRAW, these characters will appear as question marks once the file has been imported. Note too that *underlined* text from the GEM format is not supported.

Line End Styles

With the exception of arrows, line end styles cannot be mixed in CorelDRAW. Therefore, if the end styles of a line are mixed in the original GEM file, and none of the styles is an arrow, then the starting point of the line will be assumed for the whole and its style applied to both ends. The starting point is where you began drawing the original line in GEM.

Grouping

The maximum number of nested groups allowed in CorelDRAW is 10. If this limit is exceeded in the original GEM file, then some of the objects will not be grouped. If you know or suspect that your GEM file has a high level of grouping, then you may want to *regroup* objects in CorelDRAW before you start moving things around. See the CorelDRAW user's manual for information on how to *Group* if you need further information on this.

Symbols

The symbols available in GEM Artline are imported as closed curves in CorelDRAW.

HPGL Format

CorelDRAW allows the import of files conforming to the HPGL format. These are typically plotter files (.PLT) generated by programs such as AutoCAD.

Importing HPGL files into CorelDRAW

An HPGL file is imported into CorelDRAW by selecting the *Import* option under the main *File* menu. When the dialog box appears, use the scroll bars to read the list of available import formats and select the "**HPGL (PLT) .PLT**" line. You will then be prompted for directory containing the desired PLT file. Once this is specified, double-click on the filename or select the file and click on the *Open* button.

During the import, you may receive an on-screen warning stating:

*"This file may be in the wrong file format.
Do you wish to continue?"*

If you receive this, there is a possibility that your file may not be a proper HPGL file or contains too many unrecognized commands. If you select NO, then the import process will be aborted. If you answer YES, the import filter will attempt to bring in the file, but it may not load properly. You will also receive this prompt again if the filter keeps encountering too many unrecognized commands.

Limitations on imported HPGL Files

Colors

The HPGL format does not specify a color type by using CMYK values. Instead, an HPGL file contains "pen numbers" that can be made to correspond to certain colors. When an HPGL file is imported, the pen numbers it contains are first identified and then assigned sets of CMYK values, which in turn yield certain colors in CorelDRAW. The precise CMYK values assigned to each pen type are defined in the CORELDRW.INI under the section called [CDrawHPGLPenColor].

For example, in this section there are lines such as:

Pen3=" Pen#3 = Red",0,100,100,0

This particular line assigns the color "Red" to Pen#3 by giving it 0% Cyan (first numeric variable), 100% Magenta (second numeric variable), 100% Yellow (third numeric variable) and 0% Black (fourth numeric variable). Any objects in the HPGL file that have an outline or fill using

Pen #3 will be colored Red when imported into CorelDRAW. Further information on this color-mapping strategy is available in the HPGL Export section and should be read before making changes to the CORELDRW.INI file.

Note that if you import an HPGL file containing a pen color not defined in your CORELDRW.INI file, that color will default to Pen#1. This corresponds to the color "Black" in the initial pen definition configuration of CorelDRAW.

This color-mapping strategy applies to color fills as well as outlines. However only certain types of objects in the HPGL file will be filled in CorelDRAW. These objects include:

- Shade Rectangle Absolute
- Shade Rectangle Relative
- Shade Wedge

All other shape entities will be assigned outlines only.

Text

Text in an HPGL file will come into CorelDRAW as editable text. The typeface assigned to a text string corresponds to the first font listed in your CORELDRW.INI file in the [CorelDrawFonts] section. Once in CorelDRAW, the text can subsequently be assigned any typeface and size. Imported text has only an outline color assigned to it, based on its associated pen number, regardless of any fill it may have had in the original HPGL file.

Line Types

CorelDRAW supports three different line types: Dotted, Dashed and Solid. If the pattern number of a certain line in an HPGL file is between 0 and 2, that line will come into CorelDRAW as Dotted and if the pattern number is between 3 and 6, the line will be Dashed. All other pattern numbers will yield Solid line types.

IBM PIF (GDF) Format

CorelDRAW now allows the importing of image files in IBM's PIF format. This gives you access to graphics created on IBM mainframe computers.

Importing PIF files to CorelDRAW

To use this filter, click on *Import* under the main *File* pulldown menu and then select the "**IBM PIF (GDF) .PIF**" line from the dialog box. Use the file selection menu to choose the desired PIF file.

When the PIF file comes across into CorelDRAW, the image may not be centered on the page and may require scaling (either up or down) to give it a proper working size on the edit page. If the image is larger than the page, then use the tool and select . Using the tool, select all objects and reduce the group to within the page boundary.

On importing a PIF file, the message: "*Some Objects are colored white*" may appear on screen. This happens when there are white objects in the PIF graphic. Because CorelDRAW's default background is white, the presence of these objects may not be immediately apparent. By changing the drawing's background color (ie/ place a page-sized colored rectangle behind the imported graphic), any white objects will become visible.

Limitations on imported PIF files

Certain limitations on the importation of Base PIF files exist, due to the inherent differences between this format and CorelDRAW. These include:

- No "*Set Background Mix*" or "*Set Foreground Mix*" orders are processed, since CorelDRAW does not support color mixing. Instead, CorelDRAW will overlay objects in the order they are read in, and each will have its own defined color where there is no overlap.
- No "*Call Segment*" orders are processed.
- No "*Set Character Set*" orders are processed.
- "*Set Paper Color*" is not supported.
- "*Set Pattern Symbol*" is not supported.

Line Types

PIF "Line Types" are translated as follows:

- "0" and "7" become Solid in CorelDRAW
- "1" and "4" become Dash 1
- "2" and "5" become Dash 2
- "3" and "6" become Dash 3
- "8" becomes None

Dash 1,2 and 3 lines will print as dashed lines on PostScript printers, but will appear as solid lines on non-PostScript devices and on the display screen.

Text

Character strings are all treated as "stroke precision" and when imported, come across as whatever font resides at the top of CorelDRAW's font selection list (currently Avalon). The text attributes may then be changed as desired.

Note also that since all of CorelDRAW's fonts are proportionately spaced, blank-spaced strings (which were aligned in PIF) will not line up on the right-hand margin when imported. However, once in CorelDRAW, all text strings can be stretched or compressed to regain any original alignments.

MAC PICT Format

CorelDRAW allows the import of files created in MAC packages producing either the PICT1 (black & white) or PICT2 (color) formats.

Importing PICT files

A PICT file is imported into CorelDRAW by selecting the *Import* option under the main *File* menu. When the dialog box appears, use the scroll bars to read the list of available import formats and select the "**MAC PICT .PCT**" line. You will then be prompted for directory containing the desired PICT file. Once this is specified, double-click on the filename or select the file and click on the *Open* button. Note that most PICT files will come into CorelDRAW at a reduced size on the working page. To correct this, select all objects and scale them to the size you want.

Limitations on imported PICT files

Objects

Only vector objects (squares, ellipses, circles, arcs, etc.) contained in the PICT file can be imported into CorelDRAW. Bitmaps cannot be imported because of some major incompatibilities between these two inherently different formats. If the PICT file contains any bitmaps, they will be ignored and a message appears at the end of the import informing you of this. Objects that contain a fill and an outline will come into CorelDRAW as a group of two objects. One object will be the outline and the other the fill.

Colors

The MAC PICT1 format is oriented towards black and white only, whereas the PICT2 format supports color. When importing a PICT2 file into CorelDRAW, the import filter will attempt to match these colors as closely as possible.

Pattern Fills and Outlines

In the MAC PICT format, a number of patterns are available to apply to the fill and/or outline of an object. Since there are no such corresponding patterns available in CorelDRAW, an object making use of these in MAC PICT must be treated in a special way. The color of the imported fill or outline is determined and assigned a color match in CorelDRAW. Then the pattern in use is converted to a level of gray based on its

density. This level of gray is then applied to the color, yielding a certain tint (i.e. percentage of black content) of that color. As a result, patterned fills or outlines of objects in MAC PICT come into CorelDRAW with approximately the same color, but with a tint applied to that color based on how "dark" or dense the original pattern was.

Text

Text in the PICT file will come into CorelDRAW as editable text. Typefaces correspond as follows:

PICT typeface:	CorelDRAW typeface:
<i>Times</i>	Toronto
<i>Helvetica</i>	Switzerland
<i>Symbols</i>	Greek/Math Symbols

Unsupported MAC fonts come into CorelDRAW as Toronto. When the file is imported, the text alignment may not quite agree with the original file. This is due to the differences in font size, inter-character and inter-word spacing between the two formats. Any such misalignment is easily corrected in CorelDRAW. In addition, if your PICT file contains keyboard characters not supported by CorelDRAW, these characters will appear as question marks once the file has been imported. The following PICT text styles are supported: Bold, Italic, Outline, Shadow and any combination of these. Underlined text is not supported.

Note that if any rotation was applied to text in the original PICT file, it will not be imported into CorelDRAW since rotated text is converted to a bitmap in PICT and the import filter does not import bitmaps. If this situation occurs, a message will appear at the end of the import stating that bitmaps contained in the original file have been ignored.

Grouping

The maximum number of nested groups allowed in CorelDRAW is 10. If this limit is exceeded in the original PICT file, then some of the objects will not be grouped. If you know or suspect that your PICT file has a high level of grouping, then you may want to *regroup* objects in CorelDRAW before you start moving things around. See the CorelDRAW user's manual for information on how to *Group* if you need further information on this.

Lotus PIC Format

To allow you to improve the appearance of graphs produced with Lotus 1-2-3, CorelDRAW gives you the option of importing them into your drawing, then modifying them.

Importing PIC files

To use this filter, click on *Import* under the main FILE menu and then select the "***Lotus PIC .PIC***" line from the dialog box. Use the file selection menu to specify the desired file name. CorelDRAW automatically converts the file into its own format and displays it as a group of objects. You may then manipulate them the way you would any other objects in the picture. Use the *Ungroup* command if you want to manipulate individual objects in the imported graphic.

Limitations

The PIC format is relatively simple in terms of the features it contains and the types of objects it generates. These are all supported in CorelDRAW.

Text contained in the file will come in as editable text. Note that any Lotus "Title" text will come in as Avalon in CorelDRAW, which is the first typeface listed in CorelDRAW's font list. Any Lotus "non-Title" text will come in as the second typeface on CorelDRAW's font list, namely Aardvark. You can, of course, change either of these typefaces to anything you want. But if you do a lot of Lotus imports, you may want to edit the CorelDRAW fontlist to change typeface order. For instance, you may want all your titles to be in the Switzerland face, and all non-Titles to be in Toronto. By editing the [CorelDrwFonts] section of your CORELDRW.INI file to have these faces as the first and second typefaces listed respectively, Titles and non-Titles will then be assigned these fonts *automatically* whenever you import a Lotus PIC. For more information on this, consult the *CorelDRAW Software-related Information* section in this guide.

The colors contained in a PIC file are matched as closely as possible using CorelDRAW's wide range of colors.

Third-Party Connectivity Utilities

A number of third-party utilities are available to permit file conversions and transfers from other software packages into CorelDRAW. Among these are:

- Eye-Con from InSight Systems Inc., which converts Harvard Graphics EPS files to Adobe Illustrator EPS files, readable by CorelDRAW (call 703-938-0250 for information).
- HiJaak from Inset Systems, which allows file conversion between numerous formats, many of which can then be read by CorelDRAW. Formats covered include: GIF, IFF, WPG, CUT, IMG, MAC, TIF, PCL, PIX, MSP, & PCX (call 203-775-5866 for information).
- Tiffany Plus from Anderson Consulting Software, P.O. Box 40, North Bonneville WA, USA 98639. Phone: 509-427-5335
- ImagePrep from Computer Presentations, Inc. (call 513-282-3222 for information). Formats covered include: CPI, TARGA, color & greyscale TIFF, EPS, PCX, GIF, BMP)

Exporting Graphics Files to Other Software Packages

The *Export* command under CorelDRAW's FILE menu allows you to send out or "export" your CDR graphics in a variety of formats suitable for use in other software programs. In particular it allows you to create files which can be used in Xerox Ventura Publisher, Aldus Pagemaker, Word Perfect 5.0, MS Word, Lotus Manuscript, and a whole host of other desktop publishing, page layout and word processing packages running on PC's, mini's and mainframes.

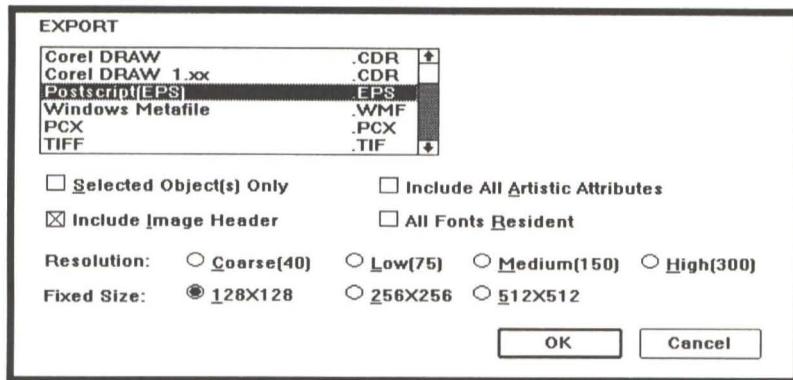
Since different graphics formats have their own, unique way of handling the information they contain, it is sometimes difficult to *precisely* translate the contents of one format to another. One format may not be capable of recording the same functions and special effects applied to an object as another format. This same problem is in evidence when importing different graphics formats. In all cases, we have tried to provide as accurate a translation between formats as is possible. You will, however, notice the differences once you start using the filters. The following pages detail some of the variations you can expect when exporting files from CorelDRAW.

Export filters available in CorelDRAW include the following bitmap and vector formats:

- Corel DRAW (.CDR)
- Corel DRAW 1.XX (.CDR)
- DXF (outlines only) (.DXF)
- Encapsulated Postscript (.EPS)
- GEM (.GEM)
- Graphics Metafile (.CGM)
- HPGL(outlines only) (.PLT)
- IBM PIF (GDF) (.PIF)
- Illustrator (.AI)
- Mac PICT (.PCT)
- PCX (.PCX)

- SCODL (.SCD)
- TIFF (.TIF)
- Video Show (.PIC)
- Corel Symbol & Typeface (.WFN)
- Windows Metafile (.WMF)
- WordPerfect Graphic (.WPG)

When you select *Export*, the following dialog box appears:



Once you have chosen the options from the dialog box and selected *OK*, the file selection dialog box appears. You can then select the filename which you want to use to save your exported graphic.

Various options are available in the *Export* dialog box below the format list. Most of these are specific to certain export formats and are therefore discussed in the relevant sections that follow. The one option that is generally applicable is the *Selected Object(s) Only*. This option is provided to let you export only a portion of your current graphic. When this option is checked, then only the currently selected objects in your CDR file will be saved in the exported file.

Export Options

Export Suggestions

The tables on the next page are guides to the graphics formats used in other popular programs and capable of being converted and exported by CorelDRAW.

Table 1 is a listing of recommended file formats for use in Page Layout and Desktop Publishing packages. The preferred format varies with the kind of printer you will be using. These can be split into two broad categories, either PostScript or non-PostScript printers. PostScript printers include devices such as the QMS PS-810, NEC Silentwriter LC890, Apple Laserwriter, and the Linotronic equipment in use at most printing/typesetting service bureaus.

Non-PostScript printers include machines such as the HP LaserJet II, HP PaintJet, and all dot-matrix printers. When you have completed a drawing in CorelDRAW, consult this table and export the drawing in the suggested format for your particular program and printer. Tables 2 and 3 deal with popular graphics-editing software packages and specialized hardware devices.

These tables are intended to serve as a guide only. Many programs are capable of handling a variety of file formats, and while we have tested a good number of these, it would be impossible to test all possible combinations of hardware and software. This is especially true when the content of a particular drawing (ie/ special effects such as fountain fills, calligraphic pens, PostScript textures, etc.) also affects how well it translates to another file format. The best approach is to consider the suggestions in the table and then experiment with your particular drawing, software and hardware.

Information on the **Corel Symbol & Typeface** Export filter can be found in the WFN Typeface Creation and Conversion Guide, Section 2.

Refer also to the *Clipboard* section in this guide as a means of transferring information between CorelDRAW and other applications that run under Windows.

1) Recommended formats for exporting graphics files from CorelDRAW to Page Layout and Desktop Publishing software packages which allow you to place, scale and crop images, but do not permit editing them.

These recommendations are based on the output device you are using. Generally, if you have a PostScript printer and the program you are using supports PostScript, then use the EPS format. Otherwise, use the format stated in the table. Other formats can be used in some cases, but do not give you as much functionality as the recommended format. Note also that PCX and TIFF can be used in all cases, but have the following disadvantages:

- Restricted to black & white only, whereas other formats support color
- Become jagged in appearance if enlarged, since they are created at a fixed resolution
- Dithered patterns for grey levels can look rough when printed

For Windows applications, the Clipboard is another method, but it is limited in size and scope. Other export methods are required for large or complex files.

Program you are exporting to:	Recommended graphic export formats for:	
	PostScript printers	Non-PostScript printers
Amí Professional	EPS	WMF
Delrina Perform	GEM	GEM
PageMaker 3.0	EPS	WMF
Ventura Publisher 2.0	EPS	GEM
WordPerfect 5.x	EPS	WPG

2) Recommended formats for exporting graphics files from CorelDRAW to other graphics software packages which allow you to edit the images:

Adobe Illustrator	AI
Arts & Letters	WMF, EPS (using Decipher)
AutoCAD	DXF
GEM Artline	GEM
MAC-based vector packages	MAC PICT, AI
Micrografx Designer	CGM
PC Paintbrush	PCX

3) Recommended formats for exporting graphics files from CorelDRAW to other graphics devices:

Matrix, Genographic Solitaire film recorders	SCODL (if PostScript compatibility is not available)
VideoShow devices	VideoShow PIC
Computer-driven cutters and machines	HPGL or DXF Outlines

CorelDRAW and CorelDRAW 1.XX Formats

You can export (as opposed to "save") the program's own format, .CDR. This can be handy, especially in conjunction with the *Selected Object(s) Only* option. This allows you to export only a *portion* of your current CDR file as a CDR file on its own. Applications include building sets of smaller files from complex ones, or splitting up large, complex files into more workable pieces. When each of the pieces are finished, you can then bring them all back together by importing one after another into a "final" version of the drawing.

The purpose of the CorelDRAW 1.XX export format is to allow you to create a version of your CorelDRAW 2.0 file that is readable by earlier versions of the program. This can be useful in sharing files with someone who does not have the latest version. If your drawing makes use of some of the new typefaces supplied with version 2.0, make sure you convert any text strings containing these to curves *before* exporting the file. If you don't, the font will be unrecognized by someone else running version 1.2 or earlier.

Exporting CDR Files

To export a CorelDRAW file from your current CDR file, choose the "*CorelDRAW .CDR*" line for exporting to version 2.0 format or the "*CorelDRAW 1.XX .CDR*" line for version 1.2 (or earlier) from the *Export* dialog box. You will then be prompted for directory to store the file. Once this is specified, enter the filename and click on the *Export* button.

Limitations

Since CDR files are CorelDRAW's native format, there are no limitations or alterations to the contents of such a file on exporting it to CDR.

Adobe Illustrator 88 AI Format

The Adobe Illustrator 88 format may now also be exported from CorelDRAW. This is similar to the EPS format described further on in this guide, however it is a *different implementation* of the PostScript language. As such, there are limitations as to the various drawing features it supports.

The primary purpose of this filter is to provide a link to MAC-based software packages capable of reading AI files. While the files it produces can be read by programs such as Ventura Publisher and PageMaker, it is *not* the recommended format to use with these. CorelDRAW's EPS export filter has much greater functionality than AI, allowing you to export features such as bitmaps, fountain fills and PostScript textures.

To use this filter, click on *Export* under the main *File* menu and then select the "**Illustrator .AI**" line from the dialog box. Use the file selection menu to specify the desired file name. When exporting files to this format, the "*Selected Object(s) Only*" option in the menu becomes available. This option permits you to export just a portion of the current graphic. Only those objects which were selected before calling the *Export* dialog box will be exported to the Illustrator file. The "*Include All Artistic Attributes*" option comes up as selected when choosing this filter. Deselecting this option has very little impact on your exported file.

After choosing a file name, a dialog box appears that allows you to select whether to export text as text or curves.

For some applications, you may wish to export text as curves instead of text. For instance, if you have a file in CorelDRAW and you want to use it in Adobe Illustrator, you can proceed in one of two ways. If your COREL file contains a font that is available in Illustrator, then export it with text sent as text. If, on the other hand, the font(s) in your COREL file is not available in Illustrator, then you should send your text as curves. Otherwise it will come into that program assigned with the Courier font.

Exporting AI files from CorelDRAW



When you export a file containing text and have decided to send it as curves, do not immediately use the "Convert to Curves" option in the main program. Instead, leave text as text while in the program and allow the filter to convert it to curves at the time of export. The filter operates in a way that eliminates most of the construction line problems encountered when converting text to curves. It also minimizes the "filling" of holes in characters such as "8" and "o". In some instances however, you may want to use the "Convert to Curves" option of the program. This allows you to convert only selected objects, rather than all text objects in your file. See the limitations below for examples of this situation.

Limitations of the Illustrator format

The following functions available in CorelDRAW are **not** supported in the Illustrator format:

- *Fountain fills.* These should not be included in a file you intend to export as AI. If they are, they will be exported as a uniform color. That color will be an **approximation** of the "*From*" color if the fountain was created using a Spot definition. It will be a color **between** the "*From*" and "*To*" colors if the fountain was created using a Process definition.
- *PostScript textures.* If these are included in your file, they will be exported as a uniform shade of grey.
- *Arrowhead line caps.* These are not supported. Any lines containing these in your CorelDRAW file will default to Butt line caps.
- *Fit Text to Path.* This function is not supported. If your drawing contains objects that use this feature and you wish to retain the effect, you may proceed in one of two ways. Either convert any such text to curves (program option) before exporting the file or send all text as curves (filter option) when exporting the file. Choosing the former option will only convert the text objects you select to curves, whereas the second option converts all text in your file to curves.
- *Calligraphic pen effects.* These are not supported. Any such effects will be exported as filled objects with a uniform thickness equal to the maximum thickness of the calligraphic pen.

- *Bitmaps.* These are ignored by the export filter.
- *Character attributes.* The Illustrator format does not support **individual** character attributes (i.e. attributes assigned to single characters within a text string) such as: rotations, kerning, vertical shifts, etc. This information is lost if text is sent as text. If you want to retain any such modifications you've made, then either convert any affected text strings to curves while creating your drawing, or send the text as curves at the time of export. Either way though, it will no longer be editable text.

Note the following when exporting the Illustrator format:

- Avoid combining objects in your CorelDRAW file, as this can lead to the problem mentioned above with the "filling of holes" and construction lines.
- If you have combined objects in your file (eg/ text with letters such as "o" and "p" which contain "holes") then note the following. If you want such objects to have a fill and outline of *different* colors, then you **must** assign these colors in CorelDRAW before exporting the file. If the outline is added after the file is imported to a program such as Adobe Illustrator, construction lines will become evident.
- If you are creating a file with the intention of printing it in programs such as Ventura or PageMaker, then export it using the EPS filter, **not** the AI filter. The EPS filter allows you to include objects such as bitmaps, fountain fills and PostScript textures in your file. These features are not supported in the AI specification.
- If you are exporting text and wish to send it as curves, then use the "Send text as curves" function of the export filter. This tends to perform the conversion in a better way than the "Convert to Curves" option in the main program.

General Notes and Suggestions

Bitmap files: PCX and TIF Formats

Two major bitmap formats are capable of being exported by CorelDRAW: PCX and TIFF. Since these formats are similar to one another, and both are intrinsically different from CorelDRAW's vector format, they are grouped together here.

These may be used in page layout programs if you do not have access to a PostScript printer, but they should be the options of last choice for that purpose. CorelDRAW includes a number of non-PostScript formats that will give you better results. Refer to the PCX/TIF/BMP section under "Importing Graphics Files" for a discussion on how these formats differ from CorelDRAW's vector format.

Exporting bitmap files

A bitmap file is exported from CorelDRAW by selecting the *Export* option under the main FILE menu. When the dialog box appears, use the scroll bars to read the list of available export formats and select the format you want, one of:

**"PC Paintbrush
"TIFF**

**.PCX, .PCC"
.TIF"**

You will then be prompted for a directory to store the file. Once this is specified, enter the filename and click on the *Export* button.

Limitations

The major disadvantage of using the PCX or TIF formats is that you must concern yourself with the dimensions and resolution which are used when you export the file. This is discussed further under the Resolution section below.

Color

Exported PCX and TIF files contain no color or grey-scale information. They are strictly monochrome. All colors are converted to dithered black and white.

Resolution

When creating PCX or TIF bitmap files, you have a choice of specifying the resolution of the bitmap. For the best looking results when creating a PCX or TIF file, select a resolution of 300 dpi.

If you enlarge a bitmap in your page layout package, you will lose resolution and the “jaggies” will become apparent. If you shrink a bitmap in your page layout package, then the result should be acceptable (to a point), but you will be wasting disk space storing information which isn’t used.

To avoid unnecessarily large bitmap files (a full page at 300 dpi uncompressed can take up to 1 Megabyte of disk space), make sure that the dimensions of your drawing in CorelDRAW are roughly the same as they will be when placed in your page layout package. Select all objects in the drawing and use the CorelDRAW scaling feature to resize the group of objects **before** you create the exported PCX or TIF file.

Computer Graphics Metafile (CGM) Format

The export of CGM files allows CorelDRAW graphics to be used in a variety of desktop publishing and applications packages, such as Ventura Publisher 2.0 and Pagemaker 3.0.

Exporting CGM Files

When exporting a CGM file, you have the option of exporting only currently-selected objects within your drawing by clicking on *Selected Object(s) Only* in the *Export* menu. In addition, you may select the *Include All Artistic Attributes* option to create a CGM file that contains all the currently available CorelDRAW-to-CGM functionality. If this option is **not** active, then most of the artistic attributes will still come across to the CGM file, with the one notable exception being CorelDRAW's calligraphic pen. Any lines created with this tool will be assigned a uniform thickness, typically the thickest possible with the style of calligraphic pen that was used. CGM files created without selecting the *Include All Artistic Attributes* option are usually smaller in size to those created with it selected.

Bitmaps

The exporting of bitmaps is not supported in the CGM format.

Fountain Fills

Fountain fills are not fully supported in CGM. While this filter will attempt to approximate a fountain-filled pattern in CGM, the results vary widely and may not be acceptable. If you wish to attempt a fountain fill export, first create and save your drawing in the CDR format, then export it as a CGM file. Next, clear your screen by selecting *New* from the main FILE menu and then import the CGM file you just created. Press F9 or Shift-F9 to preview the CGM file for evaluation.

If you find the *appearance* of the fountain fill acceptable and wish to use it, then please note the following restrictions. The *Include All Artistic Attributes* option **must** be selected. Furthermore, only the *linear* fountain fills work properly, and these must be applied strictly to non-rotated rectangular shapes (squares and rectangles). *Radial* fills applied to any object will overwrite that object.

Objects which have elliptical or irregular shapes, or have been transformed (skewed, rotated) may be *indirectly* filled with either *linear* or *radial* fills using a masking technique. This is described in the Tips & Hints (General) section under *Fountain Filling Irregular Shapes*.

PostScript Textures

PostScript textures are not supported in CGM. Any objects containing these in your CorelDRAW file will come into CGM filled with solid black.

CGM Files into Ventura 2.0

The preferred method of graphics export to Ventura is via the GEM format. However there are restrictions with respect to the complexity of your files when going out through GEM. If you find that the results are not satisfactory, then try exporting your CorelDRAW file via the CGM filter, but note the following. You may have problems with open paths or closed curves that contain either a fill of white or a fill of NONE. If you use CorelDRAW's default setting for the *Outline Pen Stretch* (default = 100%), then these types of objects may not display once the file is loaded into your Ventura document. To avoid this problem, select the Outline Pen icon  from the side menu bar and then select the  icon from the flyout menu. Set the *Outline Pen Stretch* to 99% and work on your drawing with this setting. When you are ready to export your file, select the *Include All Artistic Attributes* option and then click on *OK*.

CGM Files into WordPerfect

CorelDRAW's CGM Export format is not compatible with WordPerfect's CGM import. Use CorelDRAW's WPG Export format for creating WordPerfect graphics for use with non-PostScript printers or EPS for PostScript devices.

DXF Format (Outlines Only)

Drawings created in CorelDRAW may be exported to CAD/CAM devices or software that accept the DXF file format. This includes packages such as AutoCAD and certain computer-driven glass and sign cutters. Please note that the DXF Export filter only supports the export of outlines.

Exporting DXF files

To use this filter, select the *Export* option under the main *File* menu. When the dialog box appears, use the scroll bars to read the list of available formats and select the "**DXF (outlines only) .DXF**" line. The directory and filename may then be specified.

Note that the DXF files created in this way can become quite large. A complex drawing occupying only 20 or 30 K in CorelDRAW may easily balloon to 500 K or more in the DXF format. Ensure that you have adequate disk space available to accommodate such large files.

Notes on exported DXF files

Please note the following when exporting files from CorelDRAW to DXF for use in AutoCAD:

- CorelDRAW's selection of typefaces is exported to the DXF file, but it comes across as outline curves, not as editable text. This also applies to text on a curve. It will have been converted to outline curves.
- Calligraphic pen effects come across into DXF, but these will be seen as polygons.

The following are some of the features in CorelDRAW that are not supported when bringing a DXF file into AutoCAD:

**CorelDRAW
features not
supported in DXF**

- Solid or semi-solid object fills, PostScript textures, bitmaps, and linear or radial fountain fills. Only outlines are exported from CorelDRAW. This occurs because DXF reproduces a closed curve generated in CorelDRAW as a series of 3- and 4-point objects. If object fill is required, you must add this in AutoCAD after bringing in the DXF file.
- The colors you are able to specify in CorelDRAW are matched as closely as possible to the 256 colour scheme AutoCAD uses for the IBM Professional Graphics Controller.

Encapsulated PostScript EPS Format

If you have access to a PostScript printer, EPS is the best format to use when exporting your graphics to page layout and word processing packages. It is a fully-functional format and supports every function and feature generated within CorelDRAW. When you import your EPS graphic into the page layout program, it will print exactly as it did directly from CorelDRAW. In addition, once in the page layout package, you can size and position the graphic, and in Pagemaker and Ventura you can also crop it.

Information for the title, date and authoring program are entered automatically. As well, CorelDRAW automatically determines the size of the bounding box.

Exporting EPS files

To use this filter, click on *Export* under the main FILE menu and then select the "***PostScript (EPS) .EPS***" line from the dialog box. Use the file selection menu to specify the desired directory and filename and click on the *Export* button.

Include Image Header

One of the options in the *Export* dialog box available to this format is whether or not to include an image header in the EPS file. This header is a TIFF bitmapped approximation of the contents in your PostScript file. It is extremely useful when importing the graphic into a page layout package which supports the display of an EPS image header, since it allows you to "see" the drawing. This makes positioning, sizing and cropping the image in the page layout package much quicker and easier. Without the header, these programs cannot display the contents on screen, even though they can print them with no problems. PC Pagemaker and Ventura Publisher 2.0 both support the display of the header. Earlier versions of Ventura do not.

Normally, the image header is a bitmap of low resolution, 128 by 128 bits, since you are using it for positioning purposes only. You must be cautious if setting the *Fixed Size* to a higher value, as it impacts on the overall file size. This is an important factor with certain programs in which you might use the EPS file. Both Ventura and PageMaker fall into this category, since they are sensitive to the image header

size. For most applications, you really don't need higher resolution than 128 by 128, since the setting of this parameter ***has absolutely no impact on the printing quality of the file***. For a further discussion on these TIFF header, refer to the section "CorelDRAW and Other Applications in General" under "Tips and Hints".

All Fonts Resident

Another option that is available only for the EPS export is *All Fonts Resident*. When selected, this option causes CorelDRAW to assume that any typefaces used in your drawing are resident in your printer. All text strings contained in the file will be printed using the resident PostScript fonts instead of the CorelDRAW fonts.

There are two cases when you would use this feature:

- 1) If you have purchased downloadable PostScript typefaces from Adobe, and want to use them in place of the CorelDRAW typefaces. Make sure that you download ALL the necessary fonts before printing the file. This option is intended for *temporary* use; if you want CorelDRAW to always assume that the downloadable typefaces are available, then you should modify your CORELDRW.INI file as described in the *CorelDRAW Software-related Information* section in this guide.
- 2) The main application of this option is in the creation of a PostScript file to be printed at a PostScript typesetting or laser printing service bureau. You must however, confirm that the bureau has the Adobe versions of the fonts which you have used in your file. By choosing the *All Fonts Resident* option when creating the EPS file, you will cause the file to be printed using the Adobe faces.

If you print an EPS file created with this option selected and the typeface is NOT resident in the printer, the text will be printed in Courier, or the page will not print.

This format really has only one minor limitation with respect to the features and functions that CorelDRAW is capable of generating. Pantone Spot colors used in CorelDRAW are converted to CMYK values in EPS. In most cases, this will be a very close match.

Limitations

GEM Format

This filter permits the exporting of GEM files. However, because of differences in the various GEM formats, the exported files can only be read by GEM Artline, Delrina Perform and Xerox Ventura Publisher, Version 2.0.

Exporting GEM files from CorelDRAW

A GEM file is exported from CorelDRAW by selecting the *Export* option under the main *File* menu. When the dialog box appears, use the scroll bars to read the list of available export formats and select the "**GEM .GEM**" line. Next, you may choose to activate the *Include All Artistic Attributes* option (explained below), then click on *OK*. You will then be prompted for the directory and filename of the GEM file. Once this is specified, click on the *Export* button.

Limitations on exported GEM files

Please note the following **important points** when exporting GEM files from CorelDRAW:

Complexity

A severe limitation exists in the GEM format which allows only 128 points per object. This results in a problem when trying to export complex or combined objects from CorelDRAW. To overcome this, COREL employs a clipping algorithm which slices the objects in the drawing into strips. All strips comprising an object are then grouped into a single object. If you *re-import* this exported GEM file back into CorelDRAW, you will see the horizontal and vertical clipping lines for each object on screen. However, these lines will not appear in the preview window or on printed output. This also holds true when using an exported GEM file in Ventura Publisher; the lines may or may not appear on screen, but they will **not** be printed. If you load the file into GEM Artline, objects that appear to be individual, are actually groups of smaller objects. If you ungroup such an object and then tag and move portions of it, you will see how the object was sliced.

If the original CorelDRAW file contains many complex objects, there may be *very* many objects created in the GEM file. GEM's limit on the number of objects a file can contain may be exceeded, resulting in a less-than-complete image

coming into Artline. If this occurs, you will have to go back to the original CorelDRAW file, try to simplify it and then re-export it.

Please note that this export filter was created primarily for use with GEM Artline and Ventura 2.0. GEM files are read differently by Ventura Version 1.1 versus Version 2.0. Ventura 1.1 does not interpret Bézier curves correctly, resulting in distortion and the appearance of construction lines in most curved objects and text. This same problem occurs when bringing GEM Artline files into Ventura 1.1.

Colors

The GEM format only supports 16 standard colors, whereas CorelDRAW supports over 16 million. The GEM export filter therefore attempts to map CorelDRAW's colors to the GEM format in a special way. By using a combination of GEM's 16 basic colors and eight primary patterns, a type of color dithering is achieved in the GEM format, giving an *appearance* of more than 16 colors. Note that this mapping only applies to an object's fill color, **not** its outline color. For outlines, the CorelDRAW color is mapped to the closest possible match of GEM's 16 basic colors.

This fill and outline matching will lead to differences in appearance between the CorelDRAW file and the GEM file when previewed in Artline or Ventura. **Check your results.** If they are not quite as desired, go back and modify the original CorelDRAW file and then re-export it to GEM. For a good comparison of how the colors transfer between formats, open the file *Colorbar.CDR* in CorelDRAW and preview the colors. Export the file to GEM and then open that GEM file either in Artline or CorelDRAW. Use your Process Color Chart for comparison to the GEM file.

Text

Text exported from CorelDRAW to GEM comes across as curves. It will **not** be editable text in Artline.

Bitmaps

Bitmaps are not supported in the GEM format. If your CorelDRAW file contains any of these, they will be ignored when exporting to GEM.

Include All Artistic Attributes

The GEM image you create via the export filter will vary depending on whether or not this option is selected. With it selected, all features previewed in CorelDRAW will appear in the GEM file. However, the GEM file created will be larger in size than with this option not selected.

If this option is **not** selected, then a number of simplifications are performed to the GEM file. These include:

- Fountain-filled objects in the CorelDRAW file will be filled with a uniform mid-gray color in GEM
- All line end types will appear as rounded
- Calligraphic pen effects will be drawn with a normal pen in GEM
- Arrowhead line caps will appear differently in GEM
- All line types will appear as solid
- Scaled outlines in CorelDRAW will appear as uniform line widths in GEM

Fountain Fills

Fountain fills are supported in the GEM format, but there are some restrictions. The *Include All Artistic Attributes* option **must** be selected when exporting fountains to GEM.

Furthermore, only the *linear* fountain fills work properly, and these must be applied strictly to non-rotated rectangular shapes (squares and rectangles). *Radial* fills applied to any object will overwrite that object.

Objects which have elliptical or irregular shapes, or have been transformed (skewed, rotated) may be *indirectly* filled with either *linear* or *radial* fills using a masking technique. This is described in the Tips & Hints (General) section under *Fountain Filling Irregular Shapes*.

Note that because of the restrictions of the GEM format, you should inspect the results of exporting a fountain-filled object carefully to determine its suitability.

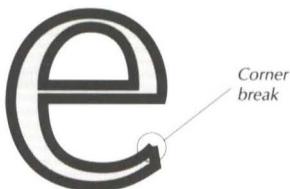
PostScript Textures

CorelDRAW's PostScript textures are not supported in GEM. Any such textures exported to GEM will appear as uniform mid-gray fills.

Object Outlines

Object outlines may either lie in front of or behind an object's fill in CorelDRAW. When an outlined object is exported to GEM, its outline width will appear to be the same as it was in CorelDRAW, provided you exported it with the *Include All Artistic Attributes* option selected. If this option is not selected, then the outline in GEM defaults to an open path in front of or behind the fill, depending on its orientation in the original CorelDRAW file. This open path will have rounded end caps.

Note also that a minor problem can occur with the outlined objects because of the way in which the GEM format closes a path. You can see the result of this in the illustration of the letter "e". Instead of a smooth outline around the entire shape, a corner break may occur where the outline actually comes together. Whether or not this is noticeable depends on the size of your objects, the thickness of the outline, and the angle between the two line segments where GEM decided to close the outline.

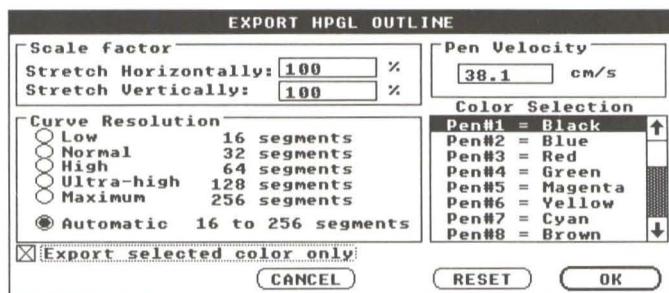


HPGL Format (Outlines Only)

Exporting CorelDRAW files to HPGL file format

A drawing created in CorelDRAW may be exported to the HPGL format (a PLT file) by selecting the *File* menu and then *Export*. From the dialog box that appears, select the "**HPGL (outlines only) .PLT**" line. Note that only outlines are exported when creating such an HPGL file. The "*Selected Object(s) Only*" option in the menu permits you to export just a portion of the current graphic. Only those objects which were selected before calling the *Export* dialog box will be exported. The "*Include All Artistic Attributes*" option comes up as selected when choosing this filter. Deselecting this has very little impact on your exported file. Click on *OK* and use the dialog box that appears afterwards to assign a destination and name to the HPGL file.

A third dialog box then appears, titled *EXPORT HPGL OUTLINE*.



This prompts the user to specify several options used in exporting the file. These options affect how the HPGL file will be handled by a plotter and they include:

- **Scale factor:** Allows a vertical and/or horizontal scaling factor to be applied to the overall image. These must be in the range 0 to 1000.
- **Pen Velocity:** Sets the speed at which your image will be drawn by your plotting device. This can be set in the range 0 to 38.1. Values in this range are increased from 0 in increments of 0.38 and are rounded accordingly by the program. Values outside this range will cause an error message to be issued. Note that a pen velocity of 0 is actually given a value of 0.38 cm/sec at the plotter.

- **Curve Resolution:** Sets the precision of curve conversion from the CorelDRAW format to HPGL. The appearance of your drawing in HPGL will depend on the resolution you select. The fixed settings (16 to 256 segments) dictate the number of line segments that will be used to approximate a Bézier curve in HPGL; the higher the value, the finer the appearance of the curve. The higher settings however also create larger, more complex files. The Automatic setting attempts to convert a curve with the best resolution possible, but without specifying too many segments. In this mode, a Bézier curve is analyzed and approximated by anywhere from 16 to 256 line segments, depending on its width and the height with respect to the overall page size.
- **Color Selection:** Displays all the defined color pens available for export, as specified in the CORELDRW.INI file (see also the *Colors* section).
- **Export selected color only:** Permits you to export only the objects that possess the selected color.

When you have specified all parameters, click on OK. The RESET button may be used to re-establish the default values.

Colors

The HPGL format does not specify a color by using CMYK values. Instead, an HPGL file contains "pen numbers" that correspond to the drawing pens available in a plotter. These pens are installed by the user and can be *any* color. When a CorelDRAW file is exported to HPGL, the colors it contains are analyzed for their CMYK content and matched as closely as possible to pen numbers defined in CORELDRW.INI under [CDrawHPGLPenColor]. Although HPGL supports 256 colors, most plotters use eight or fewer pens. For this reason, the initial configuration of CorelDRAW only defines the eight most widely used pen colors. They are as follows:

```
Pen1=" Pen#1 = Black",0,0,0,100  
Pen2=" Pen#2 = Blue",100,100,0,0  
Pen3=" Pen#3 = Red",0,100,100,0  
Pen4=" Pen#4 = Green",100,0,100,0  
Pen5=" Pen#5 = Magenta",0,100,0,0  
Pen6=" Pen#6 = Yellow",0,0,100,0  
Pen7=" Pen#7 = Cyan",100,0,0,0  
Pen8=" Pen#8 = Brown",0,50,100,25
```

Limitations on exported HPGL Files

In any such pen definition, the first of the four number variables following the text string indicates the percentage of Cyan, the second is the percentage of Magenta, the third the percentage of Yellow, and finally the fourth is the percentage of Black. All variables must have values lying in the range of 0 to 100. You can edit the CORELDRW.INI file (use Notepad or Windows Write) to add or subtract pen definitions as required, with the maximum number allowed being 256. Any of the eight initial pen colors may also have their CMYK values altered, thereby producing a unique color. These should however approximate the colors of the pens used in your plotter. Note that if you export a pen number in the HPGL file that is not supported by your plotter, that undefined pen will default to Pen #1.

The text between the quotation marks (i.e. "Pen#3=Red") is what will appear in the *EXPORT HPGL OUTLINE* dialog box under the Color Selection option, to identify the colors available for export. You may edit this string as desired, since it only used within CorelDRAW. A maximum of 18 characters may be used.

Line Types

If a line in CorelDRAW is dotted, then it is assigned a line type pattern of 0.5 in HPGL. If the line is dashed, then line type pattern assigned will be 3. Finally, if the line is solid in CorelDRAW, then the *default* line type pattern is assigned in HPGL. This corresponds to a solid line 0.3 mm thick.

Text

All objects exported to the HPGL format are converted to line segments, including text. Any text contained in your CorelDRAW file will therefore not be editable in HPGL. This is done to keep the file as simple as possible, avoiding any incompatibility with currently available plotters.

Features Not Supported

Since the HPGL filter deals with the export of outlines only, the following CorelDRAW features are not supported:

- PostScript halftone textures
- Fountain fills
- Calligraphic pens
- Bitmap export

Windows Metafile WMF Format

This is a good choice of export formats to use if you do not have access to a PostScript printer and the application you want to use the graphic in supports it. The PageMaker page layout package is a prime example of this. The Windows Metafile format is a vector-based format, as is the CDR format. As such, WMF files can be stretched and scaled and still print at the maximum resolution of your output device. It also supports a good range of colors, and the export filter will match the CorelDRAW colors as closely as possible.

For WMF export, click on *Export* and then select the **"Windows Metafile .WMF"** line from the dialog box. Use the file selection menu to specify the desired file name.

One of the disadvantages of using this format is that the WMF files can be very large if your graphic contains a lot of curves or text. This is an important factor with certain programs in which you might use the WMF file. Both Ventura and PageMaker fall into this category, since they are sensitive to file size. For a further discussion on these applications, refer to the sections "CorelDRAW and PageMaker/Ventura Publisher" under "Tips and Hints".

Since the WMF format is non-PostScript, none of CorelDRAW's PostScript functions will be supported. These include such features as PostScript fills and halftone screens. For most of CorelDRAW's other features, the Windows Metafile will be the same as what you see when view the CDR file in the Preview window.

Exporting WMF files

Limitations

IBM PIF (GDF) Format

CorelDRAW allows the exporting of IBM's PIF format. The Base PIF may then be translated to GDF format on the host using IBM-supplied utilities, for use in mainframe applications.

Exporting PIF files from CorelDRAW

To use this filter, click on *Export* under the main *File* pulldown menu and then select the "**IBM PIF (GDF) .PIF**" line from the dialog box. Use the file selection menu to specify the desired PIF file name. When exporting files to the PIF format, the "*Selected Object(s) Only*" option in the menu becomes available (bold text). This option permits you to export just a portion of the current graphic. Only those objects which were selected before calling the *Export* dialog box will be exported to the PIF file. Note that a CorelDRAW file exported to the PIF format comes across at full size and is completely scaleable.

Limitations on exported PIF files

Note the following when exporting files to the PIF format:

Include All Artistic Attributes

The *Include All Artistic Attributes* option permits the exportation of some of CorelDRAW's more complex drawing effects into the PIF file. These effects include:

- Objects created using the calligraphic pen
- Line caps
- Custom outline thicknesses
- Outlines in front of fills

If this option is selected, the filter converts these effects into polygons and then fills them. Although the filter attempts to translate fountain fills, these will usually not be reproduced precisely as seen in CorelDRAW.

If this option is **not** chosen, then all the line effects are translated to the PIF default line thickness and no attempt will be made to translate the special fills. The advantage of not choosing this option is that the PIF files created will tend

to be a smaller size than those created with the option enabled.

Color fills

Color fills are translated regardless of the *Include All Artistic Attributes* option setting and all colors generated in CorelDRAW are color-mapped to provide the best possible match to PIF's sixteen-color palette.

PostScript Textures

CorelDRAW's PostScript textures are not supported in the PIF format. Any such textures exported to PIF will appear as uniform gray fills.

Fountain Fills

The exporting of fountain fills is not supported in the PIF format. Any such fills will come into PIF with noticeably coarse banding, and usually with visible construction lines.

Bitmaps

The exporting of bitmaps is not supported in the PIF format.

Object Outlines

An object with thick outlines is exported to PIF as a group of objects. For instance, a colored rectangle will consist of five objects, where the fill is one, and each outline side of the rectangle is a separate object.

When the outline is 0.5 fractional points or less (including hairlines) then it is exported as a single curved object.

Text

When exporting a CorelDRAW file to Base PIF format, the outline and fill of all text will come across. However, these will no longer be editable text strings, they will be curves.

MAC PICT Format

CorelDRAW allows the export of images to all MAC packages capable of reading the PICT2 (color) file format.

Exporting PICT files

Create a PICT file by clicking on *Export* from the main *File* menu. Select "**MAC PICT .PCT**" from the list of available formats in the dialog box. You can then specify a directory and filename for the PICT file.

NOTE: If your file contains calligraphic pen effects or complex/combined objects (eg/ text converted to curves, objects combined with other objects, etc.), you **must** also select the *Include All Artistic Attributes* option. Click on *OK* to start the export.

Limitations on exported PICT files

The following limitations exist when exporting a CorelDRAW file to the MAC PICT format.

Objects

Only vector objects (squares, ellipses, circles, arcs, etc.) contained in the CorelDRAW file can be exported to the MAC PICT format. Bitmaps cannot be exported. If the CorelDRAW file contains any bitmaps, they will be ignored and a message will appear at the end of the export informing you of this. Objects that contain a fill as well as an outline will come into MAC PICT as a group of two objects. One object will be the outline and the other the fill. Outlines on text strings are not supported.

Colors

The colors available on the MAC are device dependent, varying with the type of display you're using. If you have a display that uses 8-bit color, you are limited to a total of 256 colors. The colors in your CorelDRAW file will be matched as closely as possible. A display that uses 24-bit color will display colors that are virtually identical to the ones you used in CorelDRAW. For more information on the MAC color capabilities, consult the "Inside Macintosh, Volume V" manual.

Fountain Fills

Fountain fills are supported in the MAC PICT format, but there are some restrictions. Only the *linear* fountain fills work properly, and these must be applied strictly to non-rotated rectangular shapes (squares and rectangles). *Radial* fills applied to any object will overwrite that object.

Objects which have elliptical or irregular shapes, or have been transformed (skewed, rotated) may be *indirectly* filled with either *linear* or *radial* fills using a masking technique. See the Tips & Hints (General) section under *Fountain Filling Irregular Shapes*.

PostScript Textures

PostScript textures are **not** supported in the MAC PICT2 format. Any such textures contained in your CorelDRAW file will be exported as a uniform shade of gray.

Bitmaps

Bitmaps are **not** supported from CorelDRAW to the MAC PICT2 format. Any bitmaps contained in your CorelDRAW file will be ignored by the export filter.

Line Caps and Calligraphic Pens

The four line caps types available in CorelDRAW are exported to the MAC PICT format, as are calligraphic pen effects. However, all of these will appear as grouped objects in MAC PICT. The *Include All Artistic Attributes* option **must** be selected when exporting calligraphic pens to MAC PICT.

Text

Text in the exported CorelDRAW file will come into PICT2 as editable text, provided you exported the file with the *Include All Artistic Attributes* option **not** selected. However, there is no typeface correspondence between the two packages. All text in your CorelDRAW file (regardless of the typeface used) will default to the currently active system font in your MAC application. When the exported file is read by a MAC PICT2 package, the text alignment may not quite agree with the original file. This is due to the differences in font size, inter-character and inter-word spacing between the two formats.

Note also that if any rotation was applied to text in the original CorelDRAW file, that rotation will be removed in the PICT2 file and the text will be in the usual horizontal orientation. The text can be rotated once the file is read into the PICT2 package. Alternatively, if you wish to keep the rotation, you have two options. Either convert your text to curves before exporting the file or export it with the *Include All Artistic Attributes* option selected which automatically converts all text in the file to curves.

Text outlines are also **not** supported in the conversion to MAC PICT. If your CorelDRAW file contains text that you intend to export as text, then it will come into MAC PICT with only the fill color. If on the other hand you wish to retain the outline and fill colors, again you have two options. Either convert your text to curves before exporting the file or export it with the *Include All Artistic Attributes* option selected.

WordPerfect's WPG Format

CorelDRAW can now also export images to WordPerfect's WPG format, for use with non-PostScript printers in WordPerfect 5.0 and later. (For PostScript printers, export your image using the EPS format.)

When creating a drawing in CorelDRAW for use in the WPG format, please note the following hints and limitations:

- Create your drawing and the final rotational orientation you intend to use in WordPerfect *while you are in CorelDRAW*. Do **not** rotate a CorelDRAW WPG file when you are back in WordPerfect, because it will not print correctly.
- PostScript textures and radial or linear fountain fills are not supported in the WPG format.
- Text is not supported as text in WPG. It is instead converted to curves by the export filter.
- Calligraphic pen effects are supported as polygons.
- The export of bitmaps is not supported to WPG.

The colors you specify in CorelDRAW are matched as closely as possible to those available in WPG. When exporting to WPG, a dialog box appears asking whether to export 16 or 256 colors. Choosing 16 colors is generally safe for a VGA display and the results in WordPerfect are usually acceptable. Choosing 256 colors can lead to results that depend on WordPerfect's screen and printer drivers. If the file is exported to WPG with 256 colors and everything appears in shades of gray in WordPerfect, then go back into CorelDRAW and re-export the file with 16 colors selected.

A WPG file is exported from CorelDRAW by selecting the *Export* option under the main *File* menu. When the dialog box appears, use the scroll bars to read the list of available export formats and select the "**WordPerfect Graphic .WPG**" line. A small dialog box then appears, allowing you to choose either 16 or 256 colors, as mentioned above. After making this selection, the directory and filename of the new WPG file may then be specified.

Preparing a file for WPG export

Exporting WPG files from CorelDRAW

SCODL SCD Format

Introduction

Using CorelDRAW, you can now create high-resolution detailed slides for use in presentations, lectures, sales meetings and the like. The SCODL format is used by some of the industry's most popular film recorders such as Matrix, Genographics and Solitaire. CorelDRAW's many artistic features and comprehensive typeface library allow you to create professional-quality slides with impact. In addition, CorelDRAW's connectivity to other graphics software (ie/ Illustrator), typeface and clipart libraries allow you to expand your slidemaking possibilities even further.

SCODL (Scan Conversion Object Description Language) is an intermediate level language used to describe geometric objects within an x-y coordinate system. Once these objects are described in SCODL, they may then be translated to a raster-based format by sending the SCODL data to the MVP+ (Master Vector Processor Plus). This enables the data to be output at high resolution to raster-scan devices such as ink-jet printers, thermal printers and film recorders. The MVP Star card may also be used in this application, provided you select the *Include All Artistic Attributes* option when exporting your file from CorelDRAW to SCODL.

Exporting CorelDRAW Files to SCODL Format

Once a drawing has been created in CorelDRAW, the *Export* option under the main *File* menu can be selected to save the file in SCODL format. The Export dialog box appears and prompts the user for the type of export filter desired. Select the "**SCODL (SCD)** .**SCD**" line. You may then choose whether or not to *Include All Artistic Attributes*. If this option is selected, the SCODL image is created without any alteration or degradation. On the other hand, if the *Include All Artistic Attributes* is **not** selected, the SCODL image will be created with some compromise, namely, object edges will not be as smooth and you may lose some image details. However, if this option is **not** selected, the size of the SCODL file created will usually be smaller than it would be with it selected. A more detailed description of how the *Include All Artistic Attributes* option affects your images is included further on.

After these choices have been made, a second dialog box will then appear. This is used to assign a name to the SCODL file. A third dialog box will then appear:



This prompts the user to set the *Background Color*. The choices available are: Black, White or Null (ie/ no background color at all, only the objects). If the Null option is chosen, then the drawing will appear in SCODL with the background set to the default color. The default color used in SCODL can be specified by the user.

This box also permits you to select whether or not an *End of Image* marker is inserted into the file. The default setting is to have the *Send End of Image* option selected, thereby including this marker. For most users and applications this is the required setting. The purpose of the marker is to inform the SCODL rasterizer that all data for a particular image has been received and that it should be displayed. If this option is **not** selected, then the rasterizer will wait to receive other files before displaying the image. This allows you to overlay multiple files in your final SCODL image. It is important to note however that when one file overlays a previous one, the color table associated with that previous file will be overwritten by the new one. This will cause the loss of the color information for the objects on the previous file.

Film recorders are generally configured such that their output screens have the same height-to-width ratio as the frame size of the film being used to record an image. In the case of 35 mm slide film, this frame size is 36 mm by 24 mm. The height divided by the width is called the *aspect ratio*, and in the case of 35 mm film, this is 24/36 or 0.67.

Aspect Ratio

To ensure that the image you wish to photograph will completely occupy the film's frame, your image **must** have the same aspect ratio as the film's frame or the output device. If it is not, then the final image on film will either be clipped (ie/ part of the original drawing not recorded) or it will contain unfilled areas along the horizontal or vertical margins, depending on the aspect ratio of the drawing. Before beginning your drawing, click on *Page Setup* under the FILE menu. Choose *Slide* from the list of available formats. This gives you a page with dimensions of 11.00" horizontally by 7.33" vertically, the same aspect ratio as a 35 mm slide.

If you are working with an existing drawing and want to export it to SCD, first open the drawing and then select Slide as your page size. You will then have to reposition all elements of your drawing to lie within the page boundary.

Any elements laying outside the page area will cause an error message to be issued when you go to export the SCD file. If you do not correct this situation, these areas will be clipped out of the final photograph and distortion of the drawing will result in the SCODL display.

Include All Artistic Attributes

The *Include All Artistic Attributes* option has the following affects on SCODL files created using this filter.

Object's Corners

If the *Include All Artistic Attributes* option **is** selected, SCODL will support any type of corners for CorelDRAW objects. If this option **is not** selected, then SCODL will display mitered corners.

Pen Shape & Calligraphic Pen Effects

If the *Include All Artistic Attributes* option **is** selected, SCODL will support full-scale pen effects with no compromise. If this option **is not** selected, then a calligraphic pen line of varying widths will be shown as a line of uniform thickness.

The SCODL format has the following limitations:

SCODL Limitations

PostScript Fills

Regardless of the *Include All Artistic Attributes* setting, all PostScript fills will be converted to a light shade of gray, since PostScript fills are not supported at all in SCODL.

Object Outline Type

SCODL will only display SOLID outlines. Dotted and dashed lines are not supported.

Line Caps

SCODL will only support rounded or butted line caps.

Bitmaps

Bitmaps cannot be exported from CorelDRAW to SCODL.

Fountain Fills

Fountain fills are supported in the SCODL format, but there are some restrictions. The *Include All Artistic Attributes* option **must** be selected when exporting fountains. Also, only the *linear* fountain fills work properly, and these must be applied strictly to non-rotated rectangular shapes (squares and rectangles). *Radial* fills will overwrite an object's shape. Objects which have elliptical or irregular shapes, or have been transformed (skewed, rotated) may be *indirectly* filled with either *linear* or *radial* fills using a masking technique. This is described in the Tips & Hints (General) section under *Fountain Filling Irregular Shapes*.

Forbidden Combinations

If an object in CorelDRAW has both fill and outline set to *NONE*, no object will be created in SCODL.

PostScript Connectivity

Agfa-Matrix offers an Adobe PostScript RIP for their film recorders. This device virtually eliminates all of the limitations listed above. Some color slide-making service bureaus have this or similar equipment available (see the *Hardware-related Information* section under *Other*).

VideoShow PIC Format

CorelDRAW now also supports the creation of files for export to equipment, such as GPC's (General Parametrics Corporation) VideoShow and SlideMaker. Both devices utilize the .PIC file format, making portability possible. You can now produce professional slides for business presentations and a host of other applications by creating your drawing in CorelDRAW and exporting it in the Videoshow format. The export file may then be used with your in-house GPC equipment, or sent to a service bureau for 35 mm slide production. Ventura 2.0 and PageMaker 3.0 also permit the importation of this file format.

Preparing the file in CorelDRAW

When creating a file for VideoShow export, please note the following guidelines and limitations.

Background Color

When using the PhotoMetric equipment or PrintMaker software, the first picture indicated in the VideoShow's *Table Of Contents* should have a background color of either white or black. If this is not set, the picture will not be recognized by GPC's software.

If you are using one of the VideoShow series of machines, please note the following. If the file you have created in CorelDRAW for VideoShow export has a background of *None* selected, and this file is inserted into a VideoShow *Table of Contents*, then you cannot directly select this drawing for display. If you do, the VideoShow machine will display the first preceding drawing in the *Table of Contents* that **has** a background color. You must therefore advance through the Table of Contents from this point on until your file is displayed. It will then display correctly.

Page Size

CorelDRAW's page size should be set to the *Slide* option in the Page Setup dialog box. This gives you a page that is 11.00" X 7.33" (11 inches horizontally and 7.33 inches vertically). This yields an *aspect ratio* identical to that of a 35 mm slide. Refer to the SCODL Export section for a more detailed explanation of *aspect ratio*.

PostScript Textures

CorelDRAW's PostScript textures are not supported in VideoShow. Objects filled with these and exported to the .PIC format will appear filled with a mid-gray color in VideoShow.

Fountain Fills

Fountain fills are supported in the VideoShow format, but there are some restrictions. The *Include All Artistic Attributes* option **must** be selected when exporting fountains to VideoShow. Furthermore, only the *linear* fountain fills work properly, and these must be applied strictly to non-rotated rectangular shapes (squares and rectangles). *Radial* fills applied to any object will overwrite that object.

Objects which have elliptical or irregular shapes, or have been transformed (skewed, rotated) may be *indirectly* filled with either *linear* or *radial* fills using a masking technique. This is described in the Tips & Hints (General) section under *Fountain Filling Irregular Shapes*.

Outline Widths

A 0.25 inch maximum limit is set for the outline width of an object. If you exceed this limit, the outline width will default to the maximum. This rule however only applies when the *Include All Artistic Attributes* is **not** selected. The effect of this setting is discussed further, under *Export Variations*.

Bitmaps

The VideoShow driver does not permit the export of bitmaps.

Please note the following before exporting a file to the .PIC format.

Exporting the PIC files

VideoShow Operating System

You must make certain that the version of the VideoShow operating system is 3.11 or greater. Unpredictable results may occur if older versions of the operating system are being used.

File Size

VideoShow files are limited to about 100K in size and this is usually sufficient for most drawings. If the CorelDRAW file you're exporting to VideoShow PIC exceeds this limit, you will be informed via an on-screen message. Even though you exceed the limit, *this is a VideoShow limit* and CorelDRAW will still create the VideoShow file. It *may* work successfully in your GPC equipment. Whether or not it does depends on the complexity of the objects contained within the drawing. Should you get this message, you have two options. You can test the VideoShow file in GPC equipment (or other applications such as Ventura Publisher that read this format) to see if it is satisfactory, or you can go back to your CorelDRAW file and try to simplify it. This may be done by reducing the number of objects or replacing complex curves with ones using fewer nodes. Rewording text to use fewer words also helps, since all text is exported to VideoShow as curves. Note that large VideoShow files may cause Ventura to crash.

Export Variations

You may export a drawing using two levels of quality. The levels are selected via the *Include All Artistic Attributes* option in the *Export* menu.

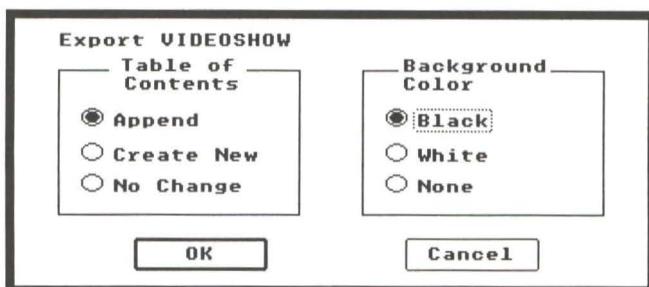
When this option is **not** selected, the drawing will appear very nearly as previewed in CorelDRAW, however some of the artistic attributes will **not** be exported. These include: line effects using the calligraphic pen; round, butt and arrowhead line caps; beveled and rounded outline corners; and dashed outlines. Other limitations applying to this level of quality include elongated outline corners on some objects and uneven curves. The main benefit of using this export level is the size of the .PIC file created. This is generally half the size of the file when exported at the higher level.

When the *Include All Artistic Attributes* **is** selected, the drawing is as true as possible to that previewed in CorelDRAW. As a result, the file size will be considerably larger because of the greater level of complexity involved.

File Export

When your drawing file is finished and ready for export, select the *Export* option from the main *File* menu. When the dialog box appears, use the scroll bars to read the list of available export formats and select the **'VideoShow .PIC'** line. Next, the appropriate artistic affects must be selected. Here you may choose whether or not to *Include All Artistic Attributes*, as previously discussed. Once this selection is completed, a dialog box prompts you for the file name.

Once you have specified a filename, another dialog box appears, prompting you for the actions to be conducted on the VideoShow's *Table of Contents* entry and the *Background Color* of the drawing.



A *Table of Contents* entry may be appended (select *Append*) to the current copy, thereby adding the new drawing to the existing table. Alternatively, the drawing can constitute a new *Table of Contents* (select *Create New*). Finally, it can simply be ignored (select *No Change*). This last option would be selected when you are updating an existing VideoShow file and do not wish to disturb the order in which it already appears in the VideoShow's *Table of Contents*.

The *Background Color* may be specified as be white (select *White*), black (select *Black*) or invisible (select *None*). An invisible background color allows you to overlay objects in different files.

Upon completion, the exported .PIC file and the *Table of Contents* (file name: TOFC) are both present in the same path.

Click on the *OK* button to continue processing or the *CANCEL* button to abort processing.

CorelDRAW Software-related Information

This section provides information on the various ASCII text files you can edit to affect the performance of CorelDRAW. If you wish to edit any of these, you **must** use an ASCII text editor, such as the Windows Notepad program, or Windows Write with **no** conversion to Write format.

WIN.INI and CORELDRW.INI Files

The following is a description of the contents and functions in the CORELDRW.INI file and WIN.INI file as it relates to CorelDRAW.

WIN.INI File

CorelDRAW relies on WIN.INI to get the directory in which the file CORELDRW.INI resides. WIN.INI contains the following section relevant to CorelDRAW:

*[CorelDraw]
Dir=<coreldrw.ini directory>*

<coreldrw.ini directory>: This is the directory containing CorelDRAW. It must be the full path, including drive. If not specified, CorelDRAW will look for the CORELDRW.INI file in the directory where WIN.INI resides.

This is the only CorelDRAW specific entry in WIN.INI. All other relevant CorelDRAW entries now reside in CORELDRW.INI.

CorelDRAW relies on CORELDRW.INI file to get the directory in which all CorelDRAW system files are, including the CorelDRAW configuration file. This directory is called the *application directory*.

CORELDRW.INI File

CORELDRW.INI should contain the following sections:

- [CDrawConfig]
- [CorelDrwFonts]
- [CorelDrivers]
- [CDrawHPGLPenColor]
- [CDrawImportFilters]
- [CDrawExportFilters]
- [CorelDrwSymbols]
- [MOSAIC]
- [CorelTrace]

[CDrawConfig]

This section contains the following, and are explained below:

```
[CDrawConfig]
Applic=<application directory>
ConfigDir=<configuration directory>
FontsDir=<fonts directory>
CDrawImportFilters=<import filter directory>
CDrawExportFilters=<export filter directory>
AutoBackupMins=<number of minutes>
MaximizeCDraw=<0 or 1>
MakeBackupWhenSave=<0 or 1>
FontRasterizer=<0 or 1>
CDRHeaderResolution=<0, 1 or 2>
```

<*application directory*> : This is the directory containing CorelDRAW and must be the full path, including drive. If you install CorelDRAW in a new directory (ie: c:\windows\winapps\cdraw), then certain CorelDRAW files must be installed in that directory. These include:

CORELDRW.EXE: CorelDRAW program file
CORELDRW.INI: CorelDRAW configuration file
CORELTRC.EXE: CorelTRACE program file
LHARC.EXE: File compression program file
MOSAIC.EXE: MOSAIC program file
USERPROC.TXT: Custom PostScript fills file
PROLOG.PS: PostScript prolog file
PROLOG.CMP: Header file for PostScript printer files

WFNBOSS.EXE: WFN BOSS program file

*.HLP: Help system text files

*.PAN: Printer-specific files. If you're printing to one of the printers indicated by a matching .PAN file name, then copy that .PAN file over the file named CORELDRW.INK.

<configuration directory>: This must be the full path, including drive. This directory contains the CDCONFIG.SYS and other internal configuration files. It facilitates network operation, since it contains user-specific configuration information. This directory should always reside in a local CPU, whereas directories such as typefaces, symbols and filters may be centralized. It should include the following files:

CDCONFIG.SYS: Internal configuration file

CORELDRW.BPT: Bitmap fills file

CORELDRW.DOT: Line-type definition file

CORELDRW.END: Arrow-head definition file

CORELDRW.INK: Pantone reference fills file

CORELDRW.IPL: Pantone Spot reference palette file

CORELDRW.PAL: CorelDRAW process colors file

*.PAT: Vector fill files

<fonts directory>: This must be the full path, including drive. If specified, this is the directory containing the fonts and symbol libraries. The fonts directory must be specified if these files are located in a directory other than the application directory.

<import filter directory>: This must be the full path, including drive. If specified, this is the directory containing the import filter files (*.DLL). The import filter directory must be set if the import filters are located in a directory other than the application directory.

<export filter directory>: This must be the full path, including drive. If specified, this is the directory containing the export filter files (*.DLL). The export filter directory must be set if the export filters are located in a directory other than the application directory.

AutoBackupMins:

<number of minutes>: This must be an integer number. It sets the number of minutes between automatic saving of current drawing to a *filename*.ABK file. If you set it to 0, the automatic backup is disabled. Default = 10.

MaximizeCDraw:

Setting this number to 1 will maximize CorelDRAW on initial start-up. If you set it to 0, CorelDRAW will start up at the default size. Default = 1.

MakeBackupWhenSave:

Setting this number to 1 will cause CorelDRAW to create a *filename*.BAK backup file every time it saves a .CDR file. If you set it to 0, no backup file will be created. Default = 1.

FontRasterizer:

Setting this number to 1 enables the internal rasterizer. The function of this rasterizer is to improve the appearance of CorelDRAW fonts printed at small sizes. If you set it to 0, the font rasterizer will be disabled. Disable it for drivers that have problems with the rasterizer. Also, if you're using Zenographics Superprint, set this to 0. Default = 1.

CDRHeaderResolution:

This entry determines the size of the bitmap image header in .CDR files. If you set this to 0, the image header is disabled. If it is set to 1, the image header is about 1K in size, corresponding to about 90 x 90 pixels. If set to 2, the image header is 2K in size, corresponding to about 128 x 128 pixels. Default = 1.

[CorelDrwFonts]

This section lists all the available CorelDRAW fonts, in lines such as:

Avalon=15 avalon.wfn 3

These all end with the .WFN extension. If you want to change the name of any of the typefaces, all you have to do is edit the name as it appears in this section. Changing a typeface name does not effect the reference in the CorelDRAW file, as the actual DOS filename is used, not the name which appears in the typeface selection list.

When you edit the name, do not change anything but the name which appears at the beginning of the line. Do not change the numbers or the filename.

For example, to change Greek/Math_Symbols to Symbol Set you would change the line:

Greek/Math_Symbols=1 symbols.wfn 1

to:

Symbol_Set=1 symbols.wfn 1

You are not allowed to put any spaces in your typeface names, so either run the words together, or use the "-" or "_" characters to separate the words.

If you have purchased downloadable typefaces for use with your PostScript printer which correspond to those provided with the package, you can have CorelDRAW print using those typefaces. The typefaces **must** be downloaded to the printer in advance, as CorelDRAW does not have an automatic downloading facility.

If you just want to temporarily use the downloadable fonts, just select the *All Fonts Resident* option in the Print dialog box. This causes CorelDRAW to use the typeface outlines stored in the printer, rather than its own, for all text strings.

If you want to permanently change the configuration of CorelDRAW to assume that a given typeface is always in the printer, then you need only change one number in the line for that particular font. That number occurs at the end of the string after the xxxx.wfn name and is used to indicate whether or not the typeface is resident in the printer. The numbers signify the following:

"0" : the typeface is NOT resident

"1" : the typeface IS resident in all PostScript printers

"3" : the typeface IS resident in recent PostScript printers

Change the "0" to a "1" or "3" to indicate that the typeface will be resident. At this time, you can also change the typeface name which appears at the beginning of the line to reflect the name of the downloadable typeface. This name will appear in the typeface selection box in CorelDRAW. Do not change the filename at the end of the line.

If you have added a typeface via WFN BOSS or the Corel Symbol & Typeface export filter, refer to the section on *Using Your Custom Typefaces* in the **WFN Type Guide** for further information.

[CorelDrivers]

This sections is used to flag various PostScript drivers that can be used by CorelDRAW. The number after the equals sign indicates to CorelDRAW whether or not the printer is PostScript. The number "1" flags the driver; "0" does not. To recognize additional PostScript drivers, add their filename to this section (e.g. the UltraScript PS driver is USPC.drv. You would add the following line: USPC=1). The two lines shown below are for the Micrografx PostScript driver (first line) and the Windows generic PostScript driver (second line).

```
MGXPS=0  
PSCRIPT=1
```

[CDrawHPGLPenColor]

This section is only needed for the import HPGL filter. It defines the colors assigned to plotter pens.

```
Pen1=" Pen#1 = Black",0,0,0,100  
Pen2=" Pen#2 = Blue",100,100,0,0  
Pen3=" Pen#3 = Red",0,100,100,0  
Pen4=" Pen#4 = Green",100,0,100,0  
Pen5=" Pen#5 = Magenta",0,100,0,0  
Pen6=" Pen#6 = Yellow",0,0,100,0  
Pen7=" Pen#7 = Cyan",100,0,0,0  
Pen8=" Pen#8 = Brown",0,50,100,25
```

[CDrawImportFilters]

This section lists the available import filters.

```
DXF=11 "AutoCAD DXF>>.DXF" *.dxf IMPFDXF.DLL 1
AI=16 "Adobe Illustrator>>.AI,.EPS" *.ai,*eps IMPFAI.DLL 1
GEM=12 "GEM>>.GEM" *.gem IMPFGEM.DLL 1
PIC=6 "Lotus PIC>>.PIC" *.pic IMPFPIC.DLL 1
HPGL=14 "HPGL>>.PLT" *.plt IMPFHPGL.DLL 1
CGM=9 "Graphics Metafile>>.CGM" *.cgm IMPFCGM.DLL 9
GDF=7 "IBM PIF (GDF)>>.PIF" *.pif IMPFGDF.DLL 1
EPS=15 "Corel Trace>>.EPS" *.eps IMPFAI.DLL 1
PICT=13 "Mac (PICT)>>.PCT" *.pct IMPFPICT.DLL 1
```

[CDrawExportFilters]

This section lists the available export filters.

```
DXF=61 "DXF (outlines only)>>.DXF" *.dxf EXPFDXF.DLL 1
CGM=56 "Graphics Metafile>>.CGM" *.cgm EXPFCGM.DLL 1
GDF=55 "IBM PIF (GDF)>>.PIF" *.pif EXPFGDF.DLL 1
GEM=65 "GEM>>.GEM" *.gem EXPFGEM.DLL 1
HPGL=63 "HPGL(outlines only)>>.PLT" *.plt EXPFHPGL.DLL 1
EPS=64 "Illustrator>>.AI" *.ai EXPFAI.DLL 1
PICT=62 "Mac (PICT)>>.PCT" *.pct EXPFPICT.DLL 1
SCODL=57 "SCODL>>.SCD" *.scd EXPFSCDL.DLL 1
VOS=58 "Video Show>>.PIC" *.pic EXPFVOS.DLL 1
WPG=59 "WordPerfect Graphic>>.WPG" *.wpg EXPFWPG.DLL 1
WFN=66 "Corel Symbol & Typeface>>.WFN" *.wfn EXPFWFN.DLL 1
```

[CORELDRWSymbols]

This section lists the symbol libraries located in the default fonts directory, such as:

```
Geographic_Symbols=geograph.wfn
Musical_Symbols=musical.wfn
Arrows1=arrows.wfn
Balloons=balloons.wfn
Digital1=digelec.wfn
Festive1=festive1.wfn
Food1=foodj1.wfn
Hygiene=hygiene.wfn
Space1=spacas1.wfn
Tools=toolgard.wfn
```

If you create your own libraries, you will have to add their names to this section, as follows:

your library name as it appears in CorelDRAW=filename.wfn

[MOSAIC]

This section lists the information required to run the MOSAIC Visual File Manager utility. It contains the following:

Applc=<application directory>
Dir=<default file preview directory>
PREFS=5

<application directory> : This is the directory containing MOSAIC. This is usually your Windows\Coreldrw directory and must be the full path, including drive.

<default file preview directory> : This is the directory that MOSAIC will search and display files from when the program is first called. This is usually your Windows\Coreldrw\Cdrfiles directory and must be the full path, including drive.

PREFS=5 : An internal MOSAIC configuration file. Do not change the value that appears here.

[CorelTrace]

This section lists the information required to run the CorelTRACE program. It contains the following:

ApplPath=<application directory>

<application directory> : This is the directory containing CorelTRACE. This is usually your Windows\Coreldrw directory and must be the full path, including drive. It contains the following files: CORELTRC.EXE, CORELTRC.PS and CORELTRC.HLP.

As you operate the program, certain other operational parameters will be written to this section. These are the customized tracing options you can configure. The values that appear here should not be altered.

CORELDRW.DOT File

The following is a description of the contents of the CORELDRW.DOT file. By editing this file, you can create your own Dashed and Dotted line styles to supplement those included with CorelDRAW. *Before editing this file, make a backup copy of it somewhere, just in case you need to access the original default values.*

To create a line style, you must specify the length of the dots/dashes and the gaps between them. Dots are actually created by defining short dashes and then specifying *Round* as their Line Cap style. When you open up the CORELDRW.DOT file in your ASCII editor, you will see rows of numbers. Each row represents a line definition, and contains anywhere from 3 to 11 numbers.

Format:

nNumbers n₁DotLength n₁SpaceLength n₂DotLength n₂SpaceLength n₅DotLength n₅SpaceLength

where:

nNumbers : is the number of elements (both dots/dashes and spaces) that define the line style (2 to 10)

n_xDotLength : is the length of dots

n_xSpaceLength : is the length of the spaces between the dots/dashes

For example, "2 1 5" means there are 2 elements defining this line style. The first one is a dot (since it is only one unit wide) followed by a five unit-wide space. These units are relative to the line's width, where that width is considered to be 1. In the above example, you can alter the spacing between the dots by altering the number 5. By the same token, you could create a dashed, with equal dash and space widths by adding a line such as "2 5 5" to this file.

Some of the existing lines in this file employing more than three numbers in a row, define lines made up of dots spaces and dashes of varying lengths. You can define up to 10 elements (dot and dashes) which make up the line. When these lines are used in a drawing, the line pattern is followed left to right through the definition, and then repeated through the length of the line.

You may define up to 40 different line styles in this file. Note that dotted and dashed lines will be displayed in CorelDRAW's preview window.

Hardware-related Information on Peripheral Devices

Printers and Plotters

PostScript Printers

There are basically two types of PostScript laser printers: the *PostScript* and the *PostScript Plus* types. Regular *PostScript* printers contain only four typeface families, specifically, COURIER, HELVETICA, TIMES and SYMBOL. On the other hand, *PostScript Plus* printers contain 11 typeface families, specifically, the four contained in regular *PostScript* printers plus a host of others such as PALATINO, BOOKMAN, etc.

CorelDRAW is set for *PostScript Plus* printers, but if you have only a regular *PostScript* printer you should make the following change to your CORELDRW.INI file. In the [CoreldrwFonts] section of the CORELDRW.INI file, all listed font names with a "3" at the end of the line are *PostScript Plus* fonts. By changing the "3" to a "0", you tell the program that the corresponding font should be substituted with a CorelDRAW font when the file is printed to PostScript.

On the other hand, some later generation PostScript printers come with over 35 ROM-resident fonts. If any of these additional ones match the resident CorelDRAW fonts, you may instruct the program to use the printer fonts when printing your file to PostScript. To do this, simply change the "0" to a "3" at the end of the corresponding font name lines in the [CoreldrwFonts] section of the CORELDRW.INI file. After changing the CORELDRW.INI file, you must first exit CorelDRAW and then re-open it for the changes to be registered.

For further information on font substitution, consult the "All Fonts Resident" section in the User's Manual and the *CorelDRAW Software-related Information* section in this guide.

Some users have found that when printing to certain PostScript printers, the unit will go idle without printing the page. While the reason for this may vary from device to device, we have found that two simple procedures solve this problem for most printers. First, you should deactivate the Windows Print Manager. Next, open CorelDRAW and activate the *Control Panel* from the *FILE* pulldown menu. Set the **Transmission Retry Time to a value of 600 or greater** (this can be set to as high as 999). Once you have completed these changes, try printing your file.

Printing Problems with PostScript Devices

The printing of fountain fills on PostScript printers has been improved to remove banding. Printing times involving fountain fills are however somewhat longer as a result. When printing at 1270 or 2540 dpi (Linotronic equipment), use a screen frequency of 128 or 200 lines per inch respectively to avoid any visible banding. At higher screen frequencies, some minor banding may appear at the extremes, but this is far less evident than it used to be. When printing at 300 or 600 dpi, reduce the screen frequency to between 40 and 60 lines per inch to reduce the banding.

Printing PostScript Fountain Fills

The resident font *Helvetica-Narrow* has been replaced with *Helvetica-Condensed* in the currently-marketed versions of the Ricoh PS and IBM 4216/30 PostScript printers. Recent purchasers of this equipment should change the following lines in the [CorelDrwFonts] section of their CORELDRW.INI file:

Change:

Switzerland-Narrow=15 swznarrw.wfn 3 and
Switzerland_Cond=15 swznarrw.wfn 0

to read:

Switzerland-Narrow=15 swznarrw.wfn 0 and
Switzerland_Cond=15 swznarrw.wfn 3

This will cause your printer to use the resident *Helvetica-Condensed* PS font instead of the COREL font. It will also indicate that the *Helvetica-Narrow* typeface is no longer resident and the Corel version **must** be used.

IBM and Ricoh PostScript Printers

Sending PostScript Files to a Service Bureau

If you intend to send your CorelDRAW files to a service bureau for printing on Linotronic equipment, then note the following:

- a) You **must** use the *Print-to-File* option and select the appropriate *Linotronic* option.
- b) If the service bureau is set up such that a Macintosh computer is driving the Linotronic equipment, you **must** create the PostScript file with the *For Mac* option selected in the Print Options dialog box.
- c) If cross hairs, crop marks or file information is required on your Linotronic file output, then you **must** choose a page size in CorelDRW which is **smaller** than the size the output device will use. For instance, if the final size of your file is to be 8.5" by 11", then choose *A3*, *Tabloid* or 10"x14" as your printing size in the *Printer Setup* menu, provided the printer can handle these sizes.

HP Paintjet Color Printer

When using the HP Paintjet, if you define a Fountain Fill that runs from one color to another, CorelDRAW will request a range of blended colors from the printer. If, at any point in this range, the 3 colors cyan, magenta and yellow are all present, the printer will replace the sum of the three inks with black. For example, if, at some point in the blend, the color is 30% cyan, 40% magenta and 50% yellow, the printer will substitute 30% black (the common amount), 10% magenta and 20% yellow.

Unfortunately, this technique produces a muddy effect on the page. To avoid this, try limiting your color spec to:

- fade to white,
- fade to black or
- only use 2 of the primary inks.

The maximum useful number for fountain stripes on the Paintjet is 65.

The PaintJet simulates colors by printing dithered cells of color. A cell is about 0.04" on a side, and is quite visible. You can reduce the visibility of this color dither by restricting your color selection to settings of exactly 0%, 25%, 50%, 75% and 100% on the primary inks. This still leaves you with a palette of about 125 colors, covering a fairly wide range.

The PaintJet offers a "transparency" print mode, which you can select using the Windows Control Panel. In this mode, the printer double prints everything. If you set this mode when printing to paper, you will get quite bright, saturated colors. Try printing the color calibration chart file (Colorbar.cdr in *Samples*) to see the effect. This mode uses twice as much ink.

The Windows Paintjet driver cannot print vector fills and monochrome bitmaps in color. Also, a monochrome bitmap's background is always printed opaque white on the Paintjet. This occurs even if the bitmap previews in color or previews with a transparent background. However, if you wish to print colored vector fills and monochrome bitmaps, the Micrografx PaintJet driver for Windows 3.0 will handle them, and it prints a transparent background.

Note that because of a conflict between our internal font rasterizer and the drivers, you should **disable** our rasterizer. Refer to the *CorelDRAW Software-related Information* section.

If you are repeatedly printing the same graphic, you may want to speed up the process by using the *Print to File* option and then printing out through DOS. See *Printing Multiple Copies of Complex Files* in the "Tips and Hints" section for further information.

There are a number of files in your CorelDRAW directory that enable better printing or display from certain, specific printers and monitors. These files all end in the .PAN extension and if you are using one of the printers or monitors listed below, copy the associated PAN file over your existing CORELDRW.INK file. Should you want to return to your original CORELDRW.INK file in the future, copy the file CMYK-150.PAN over CORELDRW.INK.

*.**PAN Files**

QMS-10.PAN: QMS Colorscript 100 Model 10 printer
QMS-30.PAN: QMS Colorscript 100 Models 20 and 30 printers
CMYK-150.PAN: 150 line Lithographic CMYK Color Separator
NEC-CMYK.PAN: NEC Colormate PostScript printers
RGBMITSU.PAN: All monitors
OCE-5232.PAN: OCE Graphics G5232 Color PostScript printer
TEK-4693.PAN: Tektronix Phaser printer, Model 4693

LaserJet and Compatibles

CorelDRAW can print on the LaserJet, and compatibles, up to the full 300 dpi resolution. However, many of the original LaserJets came equipped with only 512 kilobytes of RAM. This means that, at 300 dpi, you are limited to printing about 25 square inches of filled area. Both gray and white fills count in addition to black. A fill of None does not count. Also, if you bring CorelDRAW illustrations into Ventura or Pagemaker, you will have to take into consideration the memory space required by the downloaded fonts, and the page text. The newer LaserJets (e.g. LaserJet Series III) can have additional memory added, relieving this constraint.

Unsupported Windows Devices

CorelDRAW uses the device drivers installed during Windows setup and fully supports PostScript, Laserjet, Paintjet and Deskjet printers. If you are experiencing difficulties with peripheral devices, please ensure that Windows has been properly configured for your hardware and that your printer has been correctly installed in the Control Panel. Non-standard printers may require device drivers available through the manufacturer or Microsoft.

Since you are using Windows, many other devices are available to you, and most print CorelDRAW images quite well. However, some cannot handle the complex images that CorelDRAW can generate. Here are some hints that may help you get at least some output.

- Avoid fountain fills. Many devices cannot provide the services required to print fountains.
- If you can get simple images to print, but not complex ones, your device may be limited to only accepting a certain amount of data. If this is the case, avoid using outlines, since outline printing may generate 4-6 times as much data as just the fills. Also, avoid large bitmaps.
- If you find that "combined" objects have thin lines joining them, then your device does not support the printing of unconnected objects. If this is the case, avoid converting text to a curve. If you must, break apart the text, and recombine on a letter by letter basis. Avoid using the clipping effects discussed in the User's Manual.

When printing files to a QMS Colorsprint 100 printer, you can get deep, saturated blacks in your output by setting black fills or outlines as Cyan=100, Magenta=100, Yellow=100 and Black=100. Setting just Black=100 and all others to 0 will also give you black, but it may appear spotty when it covers a large area such as an object fill.

**Pure blacks with
the QMS
Colorsprint 100**

Some support for plotters has been added. When you are in CorelDRAW, set your outline pen width to $\frac{1}{4}$ (hair) in the fly-out menu and use a fill of X (none) for your objects. The plotter will then simply draw the outline of the object.

Plotter Support

Video Cards and Monitors

The Sigma Laserview Windows driver may have problem displaying dotted Marquee lines along a diagonal. Contact them at (415) 770-0100 for upgrade information.

**Sigma Laserview
Video Card &
Monitor**

If you use CorelDRAW with certain high-resolution video cards such as the IBM 8514/A, you may find the nodes are drawn quite small. Most other high-resolution video cards also have this problem, and it is unavoidable.

**High-resolution
Video Cards**

Other

Graphics Tablets

Windows and CorelDRAW can be used with a graphics tablet, instead of a mouse. If you do decide to try one, it will take a few minutes to get used to the fact that the pen is an "absolute" device, rather than a "relative" device, like the mouse. You don't need to repeatedly sweep to get from one side of the screen to the other, although you may need to reach a few inches further than normal. We recommend that you use a stylus that has the activation button on the side, rather than at the tip. The tip-activated one often move when you press them, which can lead to undesired movements in the artwork. Most tablets come with a utility to adjust the sensitivity (i.e. inches moved on screen compared with inches moved on the tablet). This can be handy if you are tracing over a piece of paper that you have taped to the tablet.

Extended RAM

If you have extended RAM in your PC, we recommend that you install Windows 3.0 to make use of the SMARTDRV and RAMDRIVE utilities. Make sure that your RAMDRIVE is at least 1 Megabyte in size. You can then change the directory used for storing temporary files to the RAMDRIVE to speed up program performance. For example, if your RAMDRIVE was E: then you would include the statement "**set temp=e:**" in your Autoexec.bat file. For further information on the use of the TEMP drive, see the "Tips and Hints" section under *Using the Temporary Drive*.

Network Operation

CorelDRAW is **not** designed to be operated from a file server over a local area network. The program should be installed on individual work stations. However, in order to conserve local disk storage, certain files such as fonts, symbols and filters may be centralized. If you set such a system up, you must store your configuration directory locally and indicate the appropriate network directories in your CORELDRW.INI file. Detailed information on this and other files can be found in the *CorelDRAW Software-related Information* section. If you are printing to a network printer, you should have at least 3 megabytes of free disk space available for your printing queue. You should also increase the timeout of any network parallel printing ports on your workstation to *at least* 100 seconds.

IBM-Mac Connectivity

CorelDRAW now imports and exports MAC PICT graphics files via the MAC PICT filters. In addition, files created on Mac-based systems can be imported via the AI, EPS filters. Inset System's HIJAAK software also allows you to convert MAC PAINT (MAC) files to PCX or TIFF format, which can then be imported by CorelDRAW. For users desiring connectivity outside of CorelDRAW, there are translational interfaces available such as the TOPS FlashBox and FlashCard from Sun Microsystems and the COPY II PC Option Board from Central Point Software. The newer MAC's also have an option available that allows them to read IBM 3.5" disks directly.

Transferring files from the DOS environment to a MAC-based system requires special attention. The MAC environment does not recognize file types by the use of extensions, as is the case under DOS. Instead, the MAC creates files which contain headers that provide the necessary information required by executable applications to use such files. This information includes among other things, the creator (program) of the file, the type of file it is and its date of creation. When you copy a file from DOS to the MAC environment using certain hardware/software utilities, the creator *may* be assigned as DOS and the file type as text. These two parameters must be altered in many cases so that the MAC application you want to bring the file into will be able to read it. The Resource Editor program from Apple Computer Inc. allows you edit these parameters in the required way.

PostScript Color Slide Production

Some slide making service bureaus now have the capability to produce 35 mm slides using the full PostScript functionality available through CorelDRAW. These bureaus use equipment such as the Agfa-Matrix Adobe PostScript RIP in conjunction with their slide makers. This equipment virtually eliminates the display limitations discussed in the SCODL section of this reference, and allows you to incorporate a much richer selection of effects in your slides. One such service bureau is:

Capital Presentations Inc.
10 Post Office Road
Silver Spring, Maryland, USA
20910

Phone: 301-588-9540 FAX: 301-588-0669 BBS: 301-588-0668

Tips and Hints

General

Creating Complex Art

You may find that the best way to design complex art is to create the original elements at a fairly large size, on the order of one to two inches across, or 48-100 point for text. Work with these large originals to compose the art you want, then shrink it to the required final size. This keeps the maximum possible accuracy in your drawing.

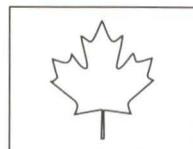
You may also find that some complex "curve" objects print well on a PostScript laser printer, but have problems printing on Linotronic equipment, causing the units to hang or crash (such files may also cause the PostScript lasers to do the same!). This occurs because complex objects (*danger threshold: 200-400 nodes per object*) can exceed certain internal limits within the PostScript language. Although the current version of CorelDRAW has been modified to minimize the occurrence of this problem, very complex curves may still cause a print job to crash. To further minimize the risk, try to observe the following when creating complex forms:

- Avoid using "Convert to Curves" on large text strings. If you must use it, then also use "Break Apart" to break the resulting curves into smaller objects. Follow this with "Combine" to combine each letter together (especially those with enclosed openings, such as "O" or "B"; the "holes" need to be combined with the outline in order to be transparent).
- Avoid combining such text with other objects (for instance, to create *mask* effects).
- Remove extraneous objects and nodes. Each object adds 150 bytes to the file by its very existence; control points and nodes each add 1 byte.

Various file formats such as CGM, GEM, MAC PICT, SCODL, and VideoShow allow objects to be fountain-filled, provided they are rectangular and use linear fountains. However these formats have difficulty when it comes to filling objects that have circular or irregular shapes or use radial fills. If such an object is *directly* filled with a fountain, the fill tends to overwrite the object's shape.

In CorelDRAW an object is fountain-filled by filling the rectangular bounding box of the object first and then WINDOWS allows the subtraction of the unwanted fill outside the object boundary. In the above-mentioned formats this last step cannot occur, so if the object has any shape other than a rectangle, the fill will cover that shape over. To get around this problem, we have found that the following masking technique allows you to *indirectly* apply linear or radial fountain fills to non-rectangular objects:

1. Create the object you want to fountain fill. This can be text or any closed curve.
2. Create a rectangle on top of the object that completely covers it.
3. Combine the rectangle and the original object into a single new object using the *Combine* command. This will cause the original object to form a "hole" of the same shape within the rectangle. Set the outline to NONE. This new combined object is your mask. Set its fill to be the same as the background color of the drawing in which it is to be used. This will make it "blend in" with the background so that it will not be visible.
4. Create another rectangle on top of the mask. This new rectangle should be smaller than and lie completely within the mask. It should also be larger than and completely cover the original object you created. Fill this new rectangle with the desired fountain fill (radial or linear) and then send it *To Back*. This will cause the fountain fill to only appear through the "holes" in the mask formed by the original object.
5. These two objects may then be *Grouped* and treated as a single unit.
6. Refer to the CorelDRAW manual under *Clipping Holes* for further information.



Working with Bitmaps

The resolution of bit-mapped graphics such as .PCX or .TIF files is dependent on the device or program which generated them. These files are built up as a number of rows of individual pixels, with a set number of pixels per row. On the other hand, vector-based (object-oriented) graphics formats like CorelDRAW or EPS are device *independent*, because all of their objects are described in terms of mathematical equations. One of the results of this basic difference is the appearance of a graphic when you change its size. If you *increase* the size of a bit-mapped graphic, it will become more "ragged", because the differences in pixels between adjacent rows and columns of the original object become amplified. If you *decrease* the size of a bit-mapped object, it may tend to become sharper, but you also risk losing picture information when the computer decides which pixels to eliminate in order to "squeeze" the graphic into the new, smaller size.

Be aware of these limitations if you intend to import and scale a bitmap in your CorelDRAW work. A bitmap is still treated as a bitmap by CorelDRAW, even though the program itself is object-oriented. Further information on the importing of bitmaps (including color and grey-scale bitmaps) can be found in this guide under *Importing Graphics Files*.

Note too that a TMP file is created for each bitmap you import into CorelDRAW. The size of this TMP file corresponds to the size of the bitmap file. This can lead to problems if you are importing numerous and/or large bitmaps and insufficient space has been allocated to your Temporary drive. See the following section on *Using the Temporary Drive* for more information.

Using the Temporary Drive

Objects in CorelDRAW can become quite complex. As a result, the program often requires more than the available DOS memory to fit all of the objects into a drawing. Objects that do not fit within this limit are then swapped to disk and stored in a file called:

~WALxxxx.TMP

This file is created at the beginning of each session and is deleted when the session ends. This temporary file can become quite large (20K to over 500K) and could exceed the amount of space available on the disk. If you've got a ramdrive, you can direct your temporary files to reside on

that drive. For example, if your RAMDRIVE is E: then you would include the statement "**set temp=e:**" in your AUTOEXEC.BAT file. Your ramdrive should be at least 1 MEG in size

Corners and arrowheads are drawn based on the position of the closest control point. If you see unexpected results (eg, the direction an arrowhead points), zoom in close, and use the  tool to see if there is a control point very near the affected point.

Effect of Control Points on Line Caps and Corners

After shaping a curve object or an ellipse several times using the  tool, the screen may become "dirty" with little pieces of black scattered across the image. The problem is exaggerated if you pan/scroll between edits. This "dirt" may be cleared by pressing Control-W.

Dirt on the Screen

If you take a single object and repeatedly transform it, making it very small, and then very big, you will notice a gradual and slight degradation of the screen object shape. There is not a corresponding corruption of the original. If this slight distortion concerns you, there are two ways to refresh the screen version of the object:

- save the file and then open it, OR,
- use any shaping action with the  tool.

You can refresh the preview screen at any time by clicking in the preview window. You can refresh the normal editing window by pressing Control-W.

Refreshing the Screen

You'll notice that enlarging or reducing the size of a rectangle that was on grid will often take it off the grid. You can always restore an object (like a rectangle) to the grid by using the *Align to Grid* function.

Scaling Rectangles Created on a Grid

Printing

Printing with Color

CorelDRAW supports a variety of color output devices such as the HP Paintjet printer. To test the color fidelity of your device, load and print the file *Colorbar.CDR* (included with your CorelDRAW samples). This is a disk file of the *Process Color Chart* card included in your CorelDRAW documentation. Your printed output should match the card in appearance (ie/ placement of elements, text, etc.) and the colors should be approximately the same (they won't match exactly, since different printers handle colors in different ways).

Printing Multiple Copies of Complex Files

You'll notice that printing numerous copies of a complex image can take quite a bit of time. If your current printer driver supports the printing of multiple copies, then use the *Copies* option in the Print Dialog box to specify how many you want. If your driver does not support this call, then use the *Print to File* option in the dialog box.

When you do this, you will be asked to specify a new file name for your printer file. Select a name and press OK. You will then be presented with the Printer setup dialog box. Use this to specify the proper parameters for the printer that will be used. Once these are set, press OK. This procedure creates a printer file with the chosen file name and a .PRN extension. You can then copy this file to the printer from DOS as often as you require. To do that, first exit Windows and then from DOS, type the following:

`copy filename.prn /b lpx` and press *ENTER*

where *filename* is the name you've given to the printer file and *x* is the correct number for the printer port you are using (usually lpt1 or lpt2). You must include the "/b" extension after the filename for non-PostScript devices.

These print files can also be sent to service bureaus or other people who may not have CorelDRAW, but do have printers.

If you set Fountain Fill on a rectangle to go from 100% black to 0% black (i.e. white), the full gray range is visible. However, if you then rotate the rectangle 45 degrees, only some of the gray range is visible. Why? The color at any point in the rectangle is based on the bounding box of the object, which is visible when you select it with the  tool. The bounding box is always upright. Since we sweep the color range across this box, the first few grays, and the last few grays are assigned to a section of the bounding box that the rectangle does not cover. Use the *Edge Pad* option in the Fountain Fill dialog box to eliminate this problem.

Fountain Fills

Hairline outlines (0.25 points) can lead to printing problems for some types of printers as well as certain software packages. These problems usually result in a partial or total dropout of a hairline from your graphic.

Hairline Outlines

We've found that exporting hairlines works fine in all supported formats except PCX and TIFF. Either of these formats can lead to difficulties when trying to print them out through other programs such as Pagemaker 3.0 or WordPerfect 5.0. On the other hand, Ventura 2.0 seems to handle them correctly.

Certain output devices may also experience problems with hairlines, regardless of the software supplying the file. While most 300 dpi PostScript printers print them well, we have noticed some dropout problems with dot matrix printers and the HP LaserJet. High-end output devices such as Linotronic equipment and the LaserMaster LX6 and LM1000 may also not print them correctly.

If this is proving to be a problem with your specific software/hardware, then try using a slightly heavier outline (0.5 points or greater) when generating your file in CorelDRAW.

When CorelDRAW is printing, a Cancel printing button is available. If you use this function, and you do not use the Print Manager, there is a chance that the printer has already received some graphics commands. In this case, the next job that you send to the printer may fail. To avoid this, you may wish to reset the printer manually.

Cancel Printing

Text and Fonts

Checking Typefaces

If you want to check the appearance of a certain typeface, load the file *Charset.CDR* from your CorelDRAW Samples. This contains a full character set to which you can assign any attribute such as typeface, font weight, fill, outline, etc. You can then preview this file in the preview window or print it out to check the results.

Use of CorelDRAW Fonts vs. ADOBE Fonts

When printing a CorelDRAW file containing text, the program can be made to automatically use the equivalent *resident fonts* (i.e. fonts that are "built-in" to your printer) or *downloaded Adobe fonts* (i.e. fonts that are "loaded into" to your printer from another source, like your computer) in your PostScript printer. These are defined in the [CorelDrwFonts] section of the CORELDRW.INI file. All fonts ending in "1" or "3" are Adobe *resident* or *downloadable* fonts and will print as such. Fonts ending in "0" will print as CorelDRAW fonts. If you have downloadable or resident fonts available and wish to use them whenever you print, simply edit the "0" value to read "1" or "3" at the end of the appropriate typeface string in the CORELDRW.INI file. This will cause the program to automatically use your printer fonts, regardless of whether or not you specify *All Fonts Resident* in the PRINT OPTIONS menu.

By contrast, if you specify *All Fonts Resident* when printing a file, you must ensure that all fonts used in that file have been correctly downloaded into the printer prior to sending the file to print. If this is not done, then any missing printer fonts will either print as Courier or the print job will crash. See the *CorelDRAW Software-related Information* section in this guide more information.

Changing All Characters in a String with the ↵ Tool

If you change the size of text with the ↵ tool, and then use the Edit Text dialog box, the point size is indicated properly. But if you use the ↵ tool to resize *all* characters in the text string, and then return to the ↵ tool, the Edit Text dialog box does not reflect the real point size. This is because the ↵ tool was designed to allow you to make exceptions in the text string (like subscripts), but you have the power to select all the characters, making them all exceptions.

The fonts that are used within CorelDRAW are high quality Bézier fonts, suitable for headlines. They do not, however, contain "hints". This means that the fonts can suffer if they are printed at smaller sizes. To overcome this, CorelDRAW now includes an internal font rasterizer to improve printing on non-PostScript printers. Even with the rasterizer, you should mind the following guidelines on text size:

Small Text

- a) If you are using PostScript, and the font which you have selected is in the printer (i.e. resident or downloaded), then you need not worry since the COREL fonts are not used. All the PostScript fonts include scaling "hints" which provide adjustments for printing at small sizes.
- b) If you are using PostScript at 300 dpi, and the font you have selected is NOT resident in the printer, try to use point sizes over 6 points; if you are sending to the Linotronic or Varityper (600 dpi), you can easily drop down to 4 points.
- c) If you are using LaserJet or Deskjet, try to keep to point sizes over 6 point.
- d) If you are using the PaintJet, try to keep to point sizes over 10 points.

CorelDRAW and Other Applications in General

Working with Other Applications

We suggest that you do **not** have any other large applications open under Windows (ie/ PageMaker, Excel, etc.) while running CorelDRAW. This can lead to memory problems which may affect operation of the program, such as limiting the number of *Import* formats displayed, problems with the *Clipboard*, and others.

Conversely, if you have a large CorelDRAW file open while you are trying to use another Windows application (like Pagemaker), and the other application is operating slower than normal, you can release some memory by "minimizing" the CorelDRAW screen. Either use the system menu option, Alt-F9, or the minimize arrow.

Exporting Drawings to Other Formats

When creating a drawing in CorelDRAW for purposes of exporting to another format, a good habit to develop is to save the file in the CDR format after you export it. In this way, you will retain all the original aspects and effects of your drawing. Some of the available export formats cannot support the full range of features in CorelDRAW, and therefore such features will be lost in the export. If you find that this is the case with your particular file, you may wish to try exporting to another format. All you have to do then is to open the CDR version of the file and select another format. In addition, CorelDRAW cannot re-import EPS, SCODL SCD or VideoShow PIC files it creates. If in the future you wish to edit any such files you've created, you can then just open the corresponding CDR file, make the changes, and then re-export it in the desired format.

Exporting Complex Art

Some of CorelDRAW's more complex functions can only be successfully exported as PostScript (EPS) files. These include: PostScript textures, halftone screens, and skewed or rotated bitmaps. If your drawing includes any of these features and you try to export it as something other than PostScript, then the **printed** file will resemble the **screen** representation of that file (*Note: screen displays cannot currently show PostScript effects*).

CorelDRAW allows you to include an *image header* when exporting a PostScript file. The image header is a TIFF bitmap which represents the appearance of the PostScript file. This is useful when creating files which will be used in programs such as Ventura Publisher 2.0 and Pagemaker 3.0, because while these programs **cannot** display the PostScript file, they **can** display the image header. This allows you to correctly size and position the graphic in those programs.

In CorelDRAW you can specify the Fixed Size of the image header at 128x128, 256x256 or 512x512. This determines the resolution of the bitmap only and **has absolutely no impact on the print quality of your drawing.** We strongly recommend using a setting of 128x128, because this keeps down the overall size of your file. A 128x128 header adds approximately 2K to the size of a file, whereas a 256x256 header adds about 8K and a 512x512 header about 32K.

These sizes however, apply to images which are more or less square in shape. When you have a graphic file that is larger in the vertical direction (height) than it is horizontally (width), these sizes can grow proportionately larger. For instance, a graphic that is twice as long as it is wide can have an image header exceeding 64K if 512x512 is chosen as the header resolution.

Size is an important factor, especially in Pagemaker 3.0, where you are limited to maximum header size of 64K. If your file exceeds this, you will get an error message stating that the file you're trying to bring in is too large.

The problem is even more serious in Ventura Publisher 2.0. This program has been known to crash or hang when trying to import a file with a header greater than 64K. Be aware also that Ventura sometimes has a problem handling TIFF headers when your graphic is much larger in one dimension than the other. These problems tend to make the correspondence of the header to the actual image inaccurate. This in turn leads to your printed graphic being incorrectly placed on the page, or incorrect scaling if you based your scaling on the appearance of the header.

Remember, your header is really only intended as a placement guide. For most purposes, you simply don't need a resolution of 512x512, or even 256x256.

CorelDRAW and Ventura Publisher 2.0

This section contains *suggested* guidelines for working with CorelDRAW files and Ventura 2.0. Each format available for exporting CorelDRAW files has its own strengths and limitations, and when choosing one, you should also take into consideration the type of printing equipment you're using. Check the sections for each format in the *Exporting Graphics Files* portion of this guide for detailed information. If you are having problems printing your graphics in Ventura 2.0, then the following points may be of some help.

Working with PostScript devices

If you are working with PostScript output devices, the suggested export format is PostScript (EPS), with an Image Header set to 128x128, if you want the header (see also *PostScript Files with TIFF Headers* under *Tips & Hints*). The PostScript EPS format has the greatest functionality of all the available formats, however it too has its limitations. For more information on these, see *Creating Complex Art* (under *Tips and Hints*) and the *Printers and Plotters* (under *Hardware-related Information*).

The Adobe Illustrator AI format can also be used with PostScript devices (see the *Exporting Graphics Files* section). However, this format should **not** be used to export graphics to Ventura. It does not support CorelDRAW's higher level functions such as fountain fills, PostScript textures, calligraphic pens and others.

Working with non-PostScript devices

GEM is the preferred format for printing to non-PostScript devices (eg/ HP Laserjet III, dot-matrix printers) from Ventura and for most graphics this works quite well. Alternative formats are also available if GEM does not yield the desired results. These include WMF, CGM, PCX and TIFF. However, there are advantages and disadvantages to each of these and often the results depend on the way a particular software package reads a specific file format. As is often the case, experimentation is the best way to determine which format gives optimum results with **your** image and equipment.

Although the CGM and WMF format may be exported to Ventura 2.0, there are sporadic problems with them. If your drawing contains text strings, there is a tendency for construction lines to get printed between the characters, when these should really be invisible. However, this problem does not occur with all fonts. Also the aspect ratio (horizontal-to-vertical) of an exported WMF drawing tends to be distorted, although this is easily corrected in Ventura through frame scaling. One major advantage of the WMF format is that there is no file size constraint as there is in Pagemaker.

If none of these vector formats provides satisfactory results, then try the bit-mapped PCX and TIFF formats. While these work with all output devices, they lose resolution when scaled upwards from their original size.

Ventura-GEM-CorelDRAW Connectivity

CorelDRAW's GEM import filter will also allow you to import GEM files created by Ventura Publisher 2.0. This is particularly significant, since Ventura creates a GEM file whenever one of its supported vector file formats is loaded into a chapter. In other words, if you have a Ventura chapter containing graphics formats such as Autocad SLD, Lotus 1-2-3 PIC, Macintosh PCT, Hewlett-Packard's HPGL and others, Ventura will automatically produce GEM conversions of these files whenever that chapter is opened. These GEM files can then be imported by CorelDRAW, giving you access to an even greater variety of drawing formats.

CorelDRAW and PageMaker 3.0

This section contains *suggested* guidelines for working with CorelDRAW files and PageMaker 3.0. Each format available for exporting CorelDRAW files has its own strengths and limitations, and when choosing one, you should also take into consideration the type of printing equipment you're using. Check the sections for each format in the *Exporting Graphics Files* portion of this guide for detailed information. If you are having problems printing your graphics in PageMaker 3.0, then the following points may be of some help.

Working with PostScript devices

If you are working with PostScript output devices in PageMaker, the suggested export format is PostScript (EPS), with an Image Header set to 128x128, if you want the header (see also *PostScript Files with TIFF Headers* under *Tips & Hints*). The PostScript EPS format has the greatest functionality of the available formats, however it too has its limitations. For more information on these, see *Creating Complex Art* (under *Tips and Hints*) and the *Printers and Plotters* (under *Hardware-related Information*).

The Adobe Illustrator AI format can also be used with PostScript devices (see the *Exporting Graphics Files* section). However, this format should **not** be used to export graphics to PageMaker. It does not support CorelDRAW's higher level functions such as fountain fills, PostScript textures, calligraphic pens and others.

Working with non-PostScript devices

Windows Metafile (WMF) is the preferred format for printing to non-PostScript devices (eg/ HP Laserjet III, dot-matrix printers) from PageMaker. Since this is an object-oriented format, objects can be scaled without affecting their resolution. This format is however limited to a file size of 64K in PageMaker.

Alternative formats are also available if WMF does not yield the desired results. These include CGM, PCX and TIFF. However, there are advantages and disadvantages to each of these and often the results depend on the way a particular software package reads a specific file format. As is often the case, experimentation is the best way to determine which format gives optimum results with **your** image and equipment.

Although the CGM format may also be exported to PageMaker, there are sporadic problems with it. It too is limited to 64K and with certain graphics elements there is a tendency to show construction lines that *should* normally be invisible.

If none of the vector formats provides satisfactory results, then try the bit-mapped PCX and TIFF formats. While these work with all output devices, they lose resolution when scaled upwards from their original size.

History of Program Changes to CorelDRAW!

This section is included for the benefit of users who are upgrading to the current version from earlier versions of CorelDRAW. It provides a history of program additions, improvements and fixes since the initial release. Note that prior to release 1.20 of CorelDRAW, all references to Windows are to be read as Windows 2.10 or 2.11.

Version 1.00

Released: JANUARY 1989

The initial release of the CorelDRAW program.

Version 1.01

Released: MARCH 1989

This was the first minor upgrade of the program, and was primarily concerned with program improvements and fixes in response to input from our users.

New Features Added

Creation of Backup Files When Saving

By editing the line MakeBackupWhenSave=x in the [CDrawConfig] portion of the WIN.INI file, you can specify whether or not CorelDRAW generates back-ups or not. By setting x=1, CorelDRAW will rename the previous version of the .CDR file to a .BAK file, before it saves your artwork. By setting x=0, no backups are made.

Whether or not you enable this option, you should make a habit of saving your work frequently, so you don't lose too much of your work in the case of a power or system failure.

Rectangles/Ellipses: Draw From Center

The drawing of rectangles (squares) and ellipses (circles) was modified so that you can now draw them from the center by holding the Shift key (with the Ctrl key) while dragging. The Status Line accurately reflects the size of the object.

ClipArt Library

The clipart library supplied with CorelDRAW was expanded to provide a wider assortment of images.

1. The FILE menu pulldown was modified to include a "Control Panel" option, which calls up the Windows CONTROL.EXE program. This allows you to select an alternate printer without leaving CorelDRAW. You should have your Windows directory in your PATH, as would be the case if you did a normal Windows installation.
2. When using the  tool on curve objects, the Status Line's counter was expanded to be able to report node counts in excess of 1024 nodes.
3. Some support for plotters was added. When you are in CorelDRAW, set your outline pen width to HAIR in the fly-out menu and use a fill of NONE for your objects. The plotter will then simply draw the outline of the object.
4. The default extension for importing Illustrator files was changed to include both .AI and .EPS . Remember that only Illustrator-formatted EPS files will load into CorelDRAW; the program *cannot* read back its own EPS files.
5. Drawing of curved objects was modified so that if you now add a node to a such an object, the new node will not disturb the shape of the original curve.
6. Importing Illustrator files was improved. The program now reads the positional data with 10 times greater accuracy.

Improvements over Version 1.00

1. There were some problems moving the end nodes of an open path, which have now been corrected. The old error code was 2002.
2. There was a problem deleting the last path of a multipath curve. This will no longer occur. The old error code was 2018.
3. Printing TIFF and PCX files that occupied more than 3 square inches and involved gray patterns would sometimes create problems. The symptom was visible horizontal disturbances in the gray areas. This has now been remedied.
4. There was a problem using fountain fills on combined curves in PostScript. You can now do this.
5. Arrow heads in PostScript would not shrink to less than about 1/4". They now can go down to 1/40".
6. There was a problem when using the tool with the or handles to interactively kern text with the Status Line enabled. This would occur when using units other than inches. This situation has been corrected.
7. During *Autotrace*, low memory would previously cause the error message "*Nothing to Autotrace*". The text of the error message has been changed to reflect the true condition.
8. During import, single objects will no longer be imported as a group.
9. Certain kinds of TIFF files which could not be previously imported, can now be loaded.
10. Export of metafiles has been modified. The color information is now exported, and for thin outlines, the file size is reduced.
11. To compensate for oddities in the 8514A driver, the screen refresh method has been changed. This does not affect any other screen.

Version 1.02

Released: APRIL 1989

This was the second minor upgrade of the program. More improvements and fixes were made, and an interface was added to permit file transfers to and from IBM mainframes.

IBM PIF Import/Export

The importing and exporting of IBM's PIF format for use in mainframe applications was included. Mainframe graphics can now be brought into CorelDRAW and then modified using the program's extensive features. Exported Base PIF files can also be translated to GDF format on the mainframe host using IBM-supplied utilities.

New Features Added

1. The Metafile export filter was enhanced to allow the exporting of bitmaps.
2. When using the "*Preview Selected Only*" feature found in the DISPLAY menu, changes were made to update the screen more frequently. This gives a truer representation of the drawing.
3. Setting the "*Grid Size*" was modified to not automatically activate the "*Snap To Grid*" function at the same time.
4. Changes were made so that when a group or multiple objects are selected, only one node per object is shown. Previously all nodes were highlighted and if the group was complex or objects were overlapping, the display of all nodes could obscure the image.
5. When producing color separations, CMYK Black and Spot Black (Pantone 0) previously printed on separate planes. They now print on the same plane.
6. Printing to non-PostScript (ie/ raster-based) printers such as the HP Laserjet II or Paintjet was improved to provide better centering of the output.

Improvements over Version 1.01

7. Printing to PostScript devices was re-structured. Now all PostScript images, regardless of their scaled sizes, are printed centered on the page. Printing to color PostScript devices was also improved.
8. Previous PostScript printing could not be reduced to further than 29% of the original size. It may now be reduced to 10%.
9. Printing is now possible through the new Version 2.0 Micrografx PostScript driver, ***but not earlier versions***. Use of this driver can reduce printing times considerably. To enable it, you must edit the Windows WIN.INI file ***after*** CorelDRAW has been installed. Locate the section labelled: [CorelDrivers] and look for the line:

MGXPS=0

Change this line to read:

MGXPS=1

This indicates that the Micrografx driver called "MGXPS.DRV" is a valid PostScript driver. You must then save the WIN.INI file and restart Windows. Use the Control Panel to install the new printer driver and select it.

10. The PostScript EXPORT function was modified to limit the size of the EPS files created, since large files can cause excessive printing times or problems when importing them into certain applications.

The fixed size of the Image Header may still be specified, ***but we strongly recommend using a setting of 128x128***.

The reason for this is that a 128x128 header adds approximately 2K to the size of a file, whereas a 256x256 header adds about 8K and a 512x512 header adds about 32K. Note that the header is really just a screen representation of your drawing. It is only used for display purposes so that you may position your drawing correctly on a page in programs like Ventura or PageMaker. The setting of the header's *Fixed Size* at

128x128, 256x256 or 512x512 ***has absolutely no impact on the print quality of your drawing.***

1. When performing rotation on multiple objects, the center of rotation now remains stationary with respect to the page.
2. The wandering of the outline pen attributes when using the "Scale With Image" feature (in the OUTLINE PEN dialog box) has been minimized. The dialog box itself has been edited to properly display pen widths.
3. When exporting CorelDRAW files to TIFF or PCX, there were occasional problems with diagonal lines translating as jagged lines. This situation has now been corrected.
4. Under certain isolated conditions, the "view ALL" feature would previously cause the program to hang. This no longer occurs.
5. Lengthy text strings using complex fonts would occasionally crash the program. This has now been addressed, and an error message stating: "*Object too complex, exceeds 64 Kbytes*" will appear on the screen. In this situation, it is advised that the text string be broken up into two or more shorter strings and positioned separately. More information on this can be found in the "Tips and Hints" section under *Creating Complex Art*.
6. In a similar situation to #5, using COMBINE on too many complex objects would occasionally crash the program. Now an error message stating: "*Object too complex, exceeds 64 Kbytes*" will appear. If this occurs, the selected objects cannot be combined and must be treated separately.
7. Manual text kerning on the IBM 8514 monitor would previously leave electronic "dirt" on the screen until the display was refreshed. This situation has now been remedied.
8. In previous program versions, undesired arrowheads (line caps) would sometimes appear on closed paths. This has been eliminated.

**Fixes from
Version 1.01**

9. Using the NODE EDIT feature was known to sometimes inadvertently change straight line segments to curved ones. This situation has now been corrected.
10. An intermittent problem where characters were dropped when using the "Fit Text To A Path" feature was corrected.
11. Certain calligraphic pen effects were occasionally causing the program to crash at high zoom levels. This has been remedied.
12. The **~WALxxxx.TMP** file was reworked so that it gets compacted by CorelDRAW after every NEW, OPEN, IMPORT or RESIZE WINDOW command. This solves the problem of the temporary file continually growing as drawing proceeds.
13. Refreshment of the preview screen was improved to correct some minor problems encountered when using actions involving the *Shift* or *Ctrl* keys.

Version 1.10

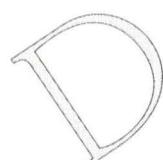
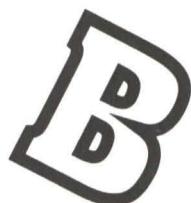
Released: JULY 1989

This was the first *major* revision to the program since its initial release. Many new features were added at this time. In addition, our first French and German versions of the program were produced at this release.

New Typefaces!

Many new and interesting typefaces were included with the 1.10 release of CorelDRAW. The user now has direct access to 102 different typestyles from 35 families. A complete visual guide to all the typestyles included with CorelDRAW was also produced. This is the *Typeface Reference Chart*.

New Features Added



WFN BOSS Typeface Conversion Utility

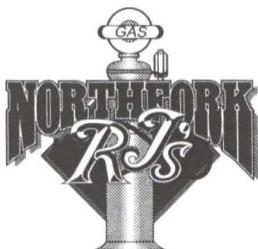
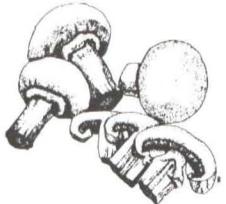
COREL's new *WFN BOSS* Typeface Conversion Utility was introduced with the 1.10 release of CorelDRAW. This stand-alone program, designed to work in conjunction with CorelDRAW, is detailed in the booklet "*WFN BOSS Typeface Conversion Utility*", packaged with CorelDRAW.

WFN BOSS is a powerful program which allows you to convert fonts from a host of other manufacturers into COREL's native .WFN font format. In effect, *WFN BOSS* lets you to add thousands of other typestyles to the over 100 already packaged with CorelDRAW!

The *WFN BOSS* program is also the first COREL program to utilize COREL's new on-screen Help System. Future releases of CorelDRAW will also employ this system.

Clipboard Support

The program was enhanced to make use of the Windows Clipboard, allowing file transfers between compatible Windows-based packages.



Improvements over Version 1.02

ClipArt Library

With this release of the program, COREL adopted a somewhat different approach to clipart than our competitors. Instead of generating an extensive clipart library in-house, we invited manufacturers from all over North America to provided samples to our users and thereby get a chance to display their own, unique styles. As a result, over 340 images were provided, uncompressed and ready to use. These were generated by many different artists, rather than a limited in-house group. In this way, users can access a wide variety of clipart *styles*, and modify them for their particular applications.

CGM Import and Export

The CGM Import and Export filter was introduced in this release. This allows the user to generate graphics in CorelDRAW that can be used in a wide variety of programs capable of reading this format. Such programs include: Ventura, PageMaker, Amí and others.

SCODL Export

Connectivity to the SCODL format was provided. With access to this file structure, users are now able to generate drawings which can then be output to a variety of raster-scan devices such as ink-jet printers, thermal printers and slidemakers. High-resolution slides for use in business presentations, lectures, etc., can now be created in CorelDRAW.

1. The reading of TIFF 5.0 files was given more flexibility, resulting in greater success importing files that deviate from the standard TIFF specifications. The error messages associated with these files were also improved.
2. The outline screen in the working window was changed so that it is now always redrawn before the preview window.
3. The *Preview Selected Only* option in the *Display* menu was changed so that it will now cause the selected objects to be previewed in the correct order relative to each other.

4. Macro performance on grouped objects was improved.
Grouped objects were previously treated in unexpected ways when certain macro operations were performed.
5. The importation of .PCX files was imported so that they now come in with an aspect ratio of 1:1, thereby eliminating distortions.
6. The cropping of imported TIFF and PCX images was modified to eliminate on-screen "electronic dirt" near the edges.
7. Changes were made so that the Windows error message that appears when using removable media (ie/ floppy disks) is less likely to occur.
8. The Preview page was modified to display with improved centering.
9. Printing fountain fills on PostScript devices was improved.

1. When dealing with large curves employing a wide calligraphic pen, previous versions sometimes generated a curve in which the outer pen boundaries would unintentionally cross over each other. This gave the curve a "bow tie" appearance when previewed or printed. This situation has been remedied.
2. Occasional program crashes during printing to non-PostScript devices has been corrected.
3. Previously, **during a single session** of CorelDRAW, multiple use of the *Export* function could cause the program to crash. This has been eliminated.
4. In earlier versions of CorelDRAW, characters in text strings would display as periods when the amount of available memory was low. This has been corrected.
5. The program was modified so that when editing text with one or more characters selected, only one attribute at a time is now changed. For example, this now permits you to change typefaces without loosing any special changes you've previously made to the text string (ie/ kerning, fit text to path, etc.).

**Fixes from
Version 1.02**

Version 1.11

Released: FEBRUARY 1990

This was a minor revision to the program from version 1.10, yet it added a number of highly desirable new features in terms of connectivity with other programs.

New Features Added

DXF Import and Export

The DXF Import and Export filters were introduced in this release. These allow the user to transfer CorelDRAW files to and from a wide variety of programs such as AutoCAD that recognize this format.

GEM Import and Export

The import filter was added to allow the import of images created with packages producing .GEM files, such as GEM Draw, GEM Graph, GEM Artline, and the .GEM files created by Ventura Publisher. The associated export filter permits the exporting of GEM files to GEM Artline, Delrina Perform and Ventura Publisher 2.0.

WordPerfect 5.0 WPG Export

This filter was added to provide graphic connectivity to WordPerfect 5.0. Users can now create detailed images for use as clipart in WordPerfect 5.0.

VideoShow Export

Connectivity to the VideoShow format was provided. With access to this file structure, users are now able to generate drawings used in VideoShow devices. This allows the production of high-resolution slides for use in business presentations, lectures, etc.

Improvements over Version 1.10

1. Text spacing defaults (Inter-Word, Inter-Character and Inter-Line) were changed to remain fixed. Previously, if you had typed in a string of text and modified the spacing defaults, these modified values would be assigned to any subsequent text you entered. Now all text objects you enter will have Inter-Word=1.00 em, Inter-Character=0.00 em and Inter-Line=100% set as

default values. These may then be changed for a particular string as required.

2. Field advances using the TAB key in the text entry dialog box were expanded to include the Typeface name field.
3. The A4 page size was adjusted to 210 mm by 297 mm.
Previously it was set to 211 mm by 297 mm.
4. The printing of dotted and dashed lines on PostScript devices was improved.

5. **Users of Micrografx PostScript drivers, please note:**

CorelDRAW is now installed with the Micrografx PostScript driver Version 2.0 selected. However, if you are using an earlier version, then either upgrade to the 2.0 version, or disable the driver in your WIN.INI file. To disable it, you must edit the Windows WIN.INI file after CorelDRAW has been installed. Locate the section labelled [CorelDrivers] and look for the line:

MGXPS=1

Change this line to read:

MGXPS=0

This indicates that the Micrografx driver called "MGXPS.DRV" is not a valid PostScript driver. You must then save the WIN.INI file and restart Windows.

1. An occasional problem resulted when printing to file using the HP Laserjet. The file would not be assigned the name you specified, and/or it would not appear in the desired directory. This has been remedied.
2. There was a problem printing fountain fills on a PostScript printer going from one color to the *same* color. This would cause the printer to crash or deliver an error message. This no longer occurs.
3. The exporting of bitmaps was improved. Previously, if a file contained a *vertical straight line having an outline width of NONE* (ie/ dimension=0) and you tried to export this as PCX, TIF and/or PostScript (EPS) with an image header, a system crash might occur. This will no longer happen.

**Fixes from
Version 1.10**

4. In previous versions, if you had gone into the Printer Setup menu from the Print Options dialog box and then returned to the Print Options, that box was not re-enabled for keyboard entries. It would only become active by using the mouse to make selections. This situation has been changed to allow either keyboard or mouse entries after Printer Setup.
5. A previous problem with the printing of an extra blank page when using the Laser Master CAP cards LC2 and LX6 has been eliminated.

Version 1.20

Released: MAY 1990

This was the second *major* revision to the program since its initial release. Many new features were added at this time, including 6 new filters and the COREL TRACE! program.

This version was also the first designed to run under both Windows 2.1 and 3.0. In addition, our first Dutch, Italian, Spanish and Swedish versions of the program were produced at this release.

CorelTRACE!

This new COREL product was bundled with CorelDRAW for the first time at this release. CorelTRACE is a stand alone utility running under Windows, and it converts bitmap-type images into vector-based images. While similar in purpose to the Autotrace function in CorelDRAW, CorelTRACE is much more sophisticated and versatile.

A filter has also been added to CorelDRAW to permit the direct importing of CorelTRACE files .

New Features Added

Adobe Illustrator AI Export

This filter was added to permit CorelDRAW to export the Adobe Illustrator AI format. It provides a useful link between MAC and PC-based systems. Many clipart vendors market their products in this format.

HPGL Import and Export

The HPGL Import and Export filters were introduced in this release. These allow the user to print CorelDRAW files on a wide variety of plotters. In addition, many programs such as AutoCAD produce HPGL (PLT) plotter files. These can now be directly imported into CorelDRAW and then modified using the program's numerous features.

MAC PICT Import and Export

These filters were added to allow the import and export of images created in MAC-based vector programs. Like the Illustrator AI filters, these also provide a useful link between MAC and PC-based systems.

Improvements over Version 1.11

1. The clipboard has been improved to allow you to copy any bitmap to it, provided that bitmap does not exceed its capacity. The bitmap will be in the CF_CORELDRAW format.
2. The pasting of metafiles from the clipboard has been improved to support hatched and bitmap brushes, such as those found in Microsoft Excel. These are now converted to solid fills of various colors.
3. The pasting of text from the clipboard into CorelDRAW has been modified. If you try to paste a text string placed into the clipboard from another package and it exceeds 240 characters, the string will be truncated after 240 characters. An error message will be issued to inform you that this has occurred.
4. CorelDRAW's TIFF and PCX output formats have been improved to allow them to be read by a greater variety of other software packages. Three changes were implemented to accomplish this:
 - 1) Our TIFF files now use Packbits compression
 - 2) The maximum strip size in the TIFF files has been reduced to 12 K from 33 K
 - 3) The output widths of both formats is now always a multiple of 16
5. The outputs of both the TIFF and PCX export filters have been altered so that the number of output lines more closely reflects the desired bitmap length. This reduces the amount of padding that was included with the files using previous versions of these filters.
6. The margins around a file exported using the EPS filter have been reduced from 3% to 0%. The bounding box of your image will therefore now represent the maximum extent or true size of your image.
7. Modifications were made to improve the display on STB and certain other high-resolution screens.

**Fixes from
Version 1.11**

1. The clipboard support has been improved so that excessively large files will cause the proper error messages to be issued. Previously these could cause the clipboard to crash.
2. A correction was made to the error messages issued when calling the CGM export filter. Previously the message "*Wrong file format or could not open*" appeared when memory was low and the user tried to export a file to the CGM format. This has been changed to state the true nature of the problem.
3. A sporadic printing and exporting problem with certain EPS clipart files has been remedied. Previously if such an EPS image was imported and then scaled up by a certain percentage, a blank page would print instead of the image. Also, if you tried to export that scaled up image as an EPS file, a blank file would be created. This no longer occurs.
4. A problem with the font list in CorelDRAW has been solved. The problem occurred if your list of available fonts contained one that you created through the WFN BOSS program. Fonts further on down the list would sometimes not be recognized when importing a file containing one of them. An example of this might be if you had a converted font such as "Caledonia" in your list and you then imported an Illustrator file containing "Times-Roman" ("Toronto" in CorelDRAW). The bug would cause all fonts on the list *after* Caledonia to be ignored. The Times-Roman font in the imported file would therefore generate an error stating that the font was not available. The text string would then be assigned the Avalon (default) font.
All available fonts are now listed and recognized.

Version 2.00

Released: NOVEMBER 1990

This is the first major *revision level* change to the program since its initial release. Many new features have been added. Major new features are listed in the front of this guide in the *New Features* section. A more comprehensive list is offered below. This version is also the first designed to run exclusively under Windows 3.0.

All new features included with this version of the program are summarized below. They are grouped according to the menu, tool, function or associated program where they occur. The features are covered in detail in the various manuals and guides supplied with the product.

New Features Added

FILE Menu

New Menu Items

Open: graphical file selector added to Open dialog

Save/Save As: "saves" only if change made

Import: - color bitmaps (pcx, tiff, bmp) imported
- .bmp files imported

Export: - WFN export allows use of CorelDRAW as a font editor
- radial & linear fountain fills can now be exported to most formats

Print: - # of fountain stripes user-definable for all printers including PostScript
- you can now include file information within printable page
- destination information displayed
- progress rate displayed
- # of copies definable from CorelDRAW
- PostScript users can set Flatness level for complex jobs
- improved PostScript printer driver for complex print jobs
- PostScript printing speed improved by 25-30%
- toggle switch for sending files to Mac-based PostScript typesetting service bureaus
- gray-scale and color bitmaps now print on all printers (used to be just PostScript)
- dotted/dashed lines now print on all printers (used to be just PostScript)
- improved print quality of gray shades on HP Laserjet and other non-PostScript black & white printers using Corel-generated halftone screens
- improved print quality of text at small point sizes for HP Laserjet and other non-PostScript printers

Print Merge: new feature to allow automatic merging of text files with CorelDRAW templates (for printing forms, certificates, etc)

- Page Setup:*
- slide aspect ratio quickly selectable now as standard choice
 - Add Page Frame: new feature adds a rectangle exactly matching page dimensions as backmost object
 - Paper Color: allows you to set the color of the background page in preview window

About: # of Groups, # of objects, and free disk space on current disk drive is now displayed

EDIT Menu

No changes were made under this menu.

TRANSFORM Menu

Move: new dialog allows numerical positioning of objects either as a relative move or absolute move.

Rotate/Skew: now allows 1/10th of a degree increments

Clear Transformations: maintains appearance of groups (ie/ only clears transformations applied to the entire group)

EFFECTS Menu (completely new)

Envelope: Editable object envelope allows a variety of object shape distortions including vertical arching; Envelopes can be compounded and can be copied from other objects. Enveloped text remains as text object which can be edited (ie/ change typeface, spelling, etc.).

True Perspective: Allows real-world perspective effects, includes two vanishing points; perspectives can be compounded and copied from other objects. Perspective text remains as text object which can be edited (ie/ change typeface, spelling, etc.).

Blend: creates any number of interpolated objects between two selected objects. Interpolated objects shapes, fill and outlines range between the two selected objects. Rotation and node matching are optional.

Extrude: creates 3D "Block Letter" effects automatically; amount of perspective is selectable.

ARRANGE Menu

Back One: Allows you to place the currently-selected object one layer "behind" its current position.

Forward One: Allows you to place the currently-selected object one layer "in front of" its current position.

Align:

- now aligns all objects to the last one selected (ie/ last object selected does not move)
- align to grid
- align to center of page

DISPLAY Menu

Grid: - separate x and y grid settings

- visible grid option

- grid snapping algorithm improved

- text objects now snap to baseline (used to be highlighting box)

Guidelines: - horizontal and vertical non-printing guidelines for aligning objects

- optional guideline snap

On-screen Color Palette: for quick fill and outline color selection

Full-screen Preview: for maximum viewing; useful for on-screen presentations

Preview Color and Grayscale bitmaps

Preview Dotted/Dashed Lines

Refresh Wire Screen command

SPECIAL Menu

Extract/Merge Back: allows substitution of text strings from external file; useful
for quickly translating diagrams to other languages

Create Pattern: allows user-definable bitmap (2 color) or vector (full color)
pattern fills; patterns can be created in CorelDRAW; as well, bitmap
patterns may be imported from popular paint packages and scanners

Create Arrow: allows user-definable line endings using shape created with
CorelDRAW; user-definable sizing and positioning

Preferences: - user-definable "nudge" allows you to shift objects by a specified
amount using keyboard arrow keys
- cross-hair cursor option
- interruptible wire-screen redraw option
- *Show Page Border* option
- *Use MOSAIC* option
- user-definable constrain angle for rotations/skew and straightline drawing
- Bézier/freehand drawing method choice
- curve flatness amount on screen redraw (to speed redrawing of Bézier curves
in complex art)
- choice of coloring techniques for graphics adapters with 256 or more colors;
includes choice of standard pure color palette, optimized pure color palette
or Corel dithering technologies; options for bitmaps and fountain fills
controllable separately.
- programmable right mouse button (choice of 2x zoom-in/out, edit text, full
screen preview, node edit)

Macros: no longer supported. Blend function and Windows-supplied macro
recorder provided comparable functionality.

↖ Tool

- Keyboard keys can be used to change an object's position (ie. "nudge")
- Scale/stretch objects from center (using Shift key)
- Rotation/skew now in 1/10th degree increments

↖ Tool

- Text: keyboard keys can be used to change a character's position (ie. "nudge")
- Curves:
 - align nodes and control points from two subpaths
 - Home/End keys jump to first/last nodes of curve
- Envelopes
- Perspective

🔍 Tool

- View ALL icon changed to non-language specific appearance (ie/ ⚡)

Bezier Tool

- Optional Bézier curve drawing mode

Ⓐ Tool

- Typeface Preview expanded to 2 characters
- Typeface Preview characters set within text dialog (used to be Preferences dialog); shows first two characters in string
- Text size units may now be specified in inches, mm, picas & points, points (used to be Points only)
- User-definable text spacing default settings
- Paragraph text mode (drag frame) including:
 - 4000 character limit
 - text wraps within frame
 - left & right justification
 - up to 8 columns with user-definable gutter width
 - paste from clipboard
 - import text from ASCII text files
 - inter-paragraph spacing
- Add Symbol mode (shift-click) for quick access to symbol libraries

Tool

- Quick selections for 12, 16, 20, 24 point line thickness added
- "None" icon changed to non-language specific appearance (ie/ X)
- Custom Outline Pen, including:
 - Dashing: expanded choice of dot and dashing with up to 40 user-definable dot/dash patterns (15 supplied)
 - Arrows: user-definable line endings allows literally any shape for line ending; separate definition for each end; positioning of arrow relative to line-end; automatic scaling to line thickness; over 80 arrow designs supplied
- Custom Outline Color, including:
 - a variety of new visual color selectors have been added
 - RGB and HSB color models added to CYMK
 - named colors (including tints of spot colors)
 - user-definable color palette for quick selection of commonly used colors
 - user-definable spot color ink table
 - overprint feature for PostScript color separations (allows intentional overprinting of outlines and/or fills on a per-object basis for trapping or special effects)

Tool

- Custom Fill Color: (see Custom Outline Color above)
- Bitmap Fill Patterns, including:
 - patterns you can create using CorelDRAW
 - over 45 standard patterns supplied
 - visual pattern selection
 - includes simple bitmap pattern editor for up to 64x64 pixel cells
 - color with any 2 colors
 - import single bit PCX or TIFF as pattern tile
 - tile offset: starting tile offset; inter row/column offset
 - set resolution and tile size
- Vector Fill Patterns, including:
 - patterns you can create and edit using CorelDRAW
 - over 30 color patterns supplied
 - visual pattern file selection
 - full color
 - tile offset: starting tile offset; inter row/column offset
 - set resolution and tile size
 - "Seamless Tiling" option avoids unsightly dithering seams
- Fountain Fills
 - new dialog allows quicker selection of start/end colors using color palettes
 - preview fountain appearance in dialog box
 - user definable edge pad allows user to make entire fountain effect visible within object
 - radial fountain center offset control

Status Line

- Expanded object information (position & dimensions)
- Typeface, style, size and alignment point shown for text objects
- Fill information expanded (color name, actual fountain fills shown)
- Outline information added (color and width shown graphically, width dimension shown in text as well)
- Cursor coordinates shown
- More detailed information during transformations

Rulers

- Subdivision units match grid now (e.g. 7 per inch)
- User-definable origin (zero point)

Associated Files and Features

CORELDRW.INI

- WIN.INI replaced by CORELDRW.INI
- Timed autobackup feature added (user-definable time)
- Start CorelDRAW in maximized window option
- Font rasterizer switch for use with products like Zenographics Superprint
- Size of bitmap header for graphical file selection
- Application, fonts, filters, user configuration information can be stored in separate directories
- Listing of symbol libraries
- MOSAIC, TRACE information

Symbol Library

- 3000+ symbol library included
- Quick visual (or key number) selection from 36 library categories
- Extremely compact storage format
- May also be used as special characters in text strings
- User can add additional symbol libraries or modify existing ones via the Corel Symbol & Typeface (WFN) Export filter

Expanded Typeface Library

- Over 50 new typefaces and styles bringing total included to 153.
- Most new additions are fancy display faces
- User can add additional typefaces or modify existing ones via the Corel Symbol & Typeface (WFN) Export filter

Expanded ClipArt Library

- Over 750 images totaling over 9 megabytes
- Organized into 14 libraries spanning a variety of common categories
- Visual file selection via the MOSAIC utility

Miscellaneous CorelDRAW features

- Optimized for Windows 3.0 only operation
- Toolbox and associated flyouts changed to Windows 3.0 "push-button" look on color monitors
- Toolbox flyout menus compressed
- Keyboard shortcuts for many functions added
- Animated hourglass cursor during time-consuming operation gives user feedback that program is working
- Separate "new object" defaults for text and other objects
- Centimeters replaced by millimeters in all measurements
- New colored Windows 3.0 icon (balloon)
- New start-up screen with CorelDRAW balloon
- Configuration of preview window saved with file

CorelTRACE Program

- User-definable trace area
- Show progress rate
- Show tracing information (number of objects & nodes, tracing time, bitmap size)
- Support for tracing of gray-scale and color bitmaps (including choice of # of color-reduction levels)
- View bitmap image
- View bitmap file information
- Expanded help file now uses Windows 3.0 help

WFN BOSS Utility

- Exports Adobe Type 1 format allowing Corel WFN fonts to:
 - be downloaded to PostScript printers
 - used with other programs
 - used with Adobe Type Manager
- Now uses Windows 3.0 help

MOSAIC Utility

This all-new utility for dealing with multiple CDR files includes:

- batch printing (ie. printing of multiple CDR files)
- batch export
- graphical file selection from a gallery of image thumbnails
- slideshow capability
- associate notes and keywords with files
- select files by keyword
- create compressed image libraries to conserve disk space;
files can be retrieved individually from compressed libraries

Documentation

- All existing books and cards updated
- All-new introductory video
- New books include:
 - 1) *"Learning CorelDRAW"*: an eight lesson introductory tutorial
 - 2) *"Corel Typeface Conversion & Creation"* guide
 - 3) *"MOSAIC"* Guide
 - 4) All-new *ClipArt* catalog

Undocumented Program Improvements

A variety of other small program improvements and fixes have been implemented. If you want to know the status of a bug you have reported, contact us on our Technical Support Hotline at 613-728-1990.

COREL Support Services

Customer Service Group

Contact our **Customer Service & Telemarketing Group** at 613-728-8200 for help with the following:

- Upgrade and software update information
- Disk and documentation replacement information
- All non-technical questions and issues

Technical Support Hotline

COREL provides all registered software customers with access to our **Technical Support Hotline**.

If you have a **technical** problem and can't find the answer in the manual, give us a call at 613-728-1990 or FAX us a note at 613-761-9175, and we will do our best to help you out. If your problem is a particularly sticky one, we may request that you send us the troublesome file either via modem (BBS: 613-728-4752) or mail/courier. ***It would also be helpful if you were at your computer when placing a call.*** This lets our Hotline team work through your difficulties with you.

Before calling the Hotline, please have the following information available:

- A brief description of the problem, including any error messages received, and the steps to recreate it
- Type of computer, monitor and video card (display adapter) you're using
- Type of pointing device in use (ie/ mouse, tablet)
- Type of printer you're sending your files to
- The version of CorelDRAW, DOS and Microsoft Windows you're running
- A list of any programs loaded in RAM
- The contents of your AUTOEXEC.BAT and CONFIG.SYS files

Ideas

Work is continually proceeding on future versions of CorelDRAW!

If you have any ideas for new features you think we should include, please drop us a note. We have received numerous suggestions in the past and have implemented many of them in this release. More are welcomed.

We are always interested in your feedback.

Address your comments to:

CorelDRAW Product Manager,
COREL Systems Corporation,
1600 Carling Avenue,
Ottawa, Ontario, Canada
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Notes



COREL

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1600 Carling Ave
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CorelDRAW - Release 2.01

Update Booklet

Dear CorelDRAW User,

To thank the many people who took the time to give us their feedback and help us make CorelDRAW 2.0 even better, this 2.01 upgrade has been supplied free-of-charge to all registered 2.0 users.

Release 2.0 was a major upgrade to CorelDRAW's previous capabilities. Many innovative new features were introduced in CorelDRAW 2.0, and while we tried to make the software as error-free as possible, some things were bound to slip by us. Release 2.01 of CorelDRAW addresses the problems that our testers have identified in the 2.0 release.

In addition, we've taken the time to implement a few new features and to improve the documentation. This booklet examines each of the manuals supplied with CorelDRAW and details the changes that have been made, on a page-by-page basis. **We strongly recommend that you take the time to read this booklet and compare its' contents with the documents you received with your original 2.0 purchase.** This will help to avoid confusion, especially once you've loaded the 2.01 software and start using it.

We all share a commitment to quality and excellence and will do our best to continue to provide you with software which meets your needs. As always, we hope you enjoy using CorelDRAW and welcome any comments or suggestions.

Regards,

The Corel Product Development Team

Update Kit contents

Your CorelDRAW 2.01 update kit includes the following items:

- Release 2.01 software, in one of the following formats:
 - Two 5.25" 1.2 M disks **OR**
 - Two 3.5" 1.44 M disks
- MOSAIC User's Guide
- CorelDRAW Update Booklet

Installation Procedure

The disks in your upgrade kit do **not** replace any of the disks in your original purchase. They are a special configuration used to update the original installation. Therefore, **do not** discard or overwrite your version 2.00 disks. Should you ever need to completely re-install CorelDRAW, you will need the old disk set, as well as the two upgrade disks.

The 2.01 release of CorelDRAW must be installed from Windows 3.0. Your User's Manual details an older DOS installation procedure. **Ignore that section completely.** To perform the installation from Windows, follow these steps:

- 1) Insert Disk #1 into drive A or B, whichever is correct for your computer or disk format.
- 2) Open the Windows File Manager and click on the appropriate drive icon.
- 3) Display disk contents by double-clicking on the file folder icon next to the drive name.
- 4) Double-click on *INSTALL.EXE* to start the Installation program.
- 5) Once the installation program is started, you will be prompted for the directory name where you want the CorelDRAW program, and the CorelTRACE, MOSAIC and WFN BOSS utilities to be stored. This should be the same directory you installed version 2.00 in, since you want 2.01 to overwrite the older version.
- 6) When the software has finished loading, the Windows Program Manager will be displayed again. You may double-click on any of the icons in the *Corel Applications* group to start the desired program. Please consult the User's manual for information on changing your system configuration, setting up device drivers, etc.

Special Installation Configurations

CorelDRAW allows you to customize its' directory structure to facilitate network operation and to optimize disk storage requirements. Information on this can be found in the CorelDRAW Technical Reference Guide, under the topic of the CORELDRW.INI File. This procedure basically involves creating separate *application*, *configuration*, *fonts* and *filters* directories, moving the appropriate files into those directories, and then informing the program of where exactly these directories are located. **Please note that you will have to repeat that process after the 2.01 upgrade has been installed.** The installation procedure for this upgrade will **not** scan your CORELDRW.INI file for any such custom information. It will only perform the default installation configuration. For most users, this will be perfectly adequate. However, users who have performed such customization should note this carefully, since the older versions of the CorelDRAW files will still be in the customized directories after the upgrade has been installed. These **must** be deleted or overwritten to avoid operational conflicts.

URGENT!! - Read This Before Installing 2.01

Installing CorelDRAW 2.01 in Windows Real Mode with limited memory available

If you are running Windows in Standard or 386-Enhanced Mode, you can disregard this sheet. For those running Windows in Real Mode with limited conventional memory available, it has come to our attention that such a configuration may give you difficulties when trying to install CorelDRAW 2.01. The situation becomes critical when approximately 280K or less of conventional memory is available. If you're running Windows in Real Mode, two options exist for performing the installation in a low-memory situation. These are detailed below.

1) You can try the installation procedure as detailed in either the User's Manual (for installation from floppy disks) or the "Read This First" and "CD-ROM Addendum" for installation from CD-ROM. If you do not have enough conventional memory available, one of two things will occur.

a) The installation procedure will begin and shortly thereafter, Windows will issue the error message:

"There was an error in the DOS section."

The installation procedure will then be aborted.

b) The installation procedure will begin, but the system will return you to the Windows Program Manager, and the installation procedure will have been aborted.

If you've already tried the installation and one of these two situations has occurred, the solution is very straightforward. Before the installation procedure was aborted, two "temporary" files were copied into your Windows directory. These are **CDINST.EXE** and **CDINST.INF**. To now proceed with a proper installation, open the Windows File Manager and go to your Windows 3.0 directory. Find and then **double-click** on the **CDINST.EXE** file. The installation procedure should then work just fine. Do **not** try to perform the install by clicking on *Run...* under the File Manager's *File* menu. In this situation, that approach will not work properly.

2) If you know that you're running in a low-memory situation, you can avoid the occurrence of a) or b) above by simply manually copying the **CDINST.EXE** and **CDINST.INF** files into your Windows 3.0 directory on your hard drive before trying to install the program. You can use the Windows File Manager to copy these files, which can be found in the **INSTINFO** directory on the CorelDRAW distribution disk #1. Once you've copied them over, the installation procedure is as described above. Simply open the Windows File Manager and go to your Windows 3.0 directory. Find and then **double-click** on the **CDINST.EXE** file. You will then be prompted for the appropriate Destination and Source drives and the installation will proceed as normal.

This 2.01 release of CorelDRAW includes certain new program features and code fixes. A summary of the new features appears on pages 24 & 25 of this booklet. In addition to describing what's new, we've also taken this opportunity to correct various errors and omissions discovered in the original CorelDRAW 2.0 booklets after they first went to print. **Please check the entire contents of this Update Booklet carefully.** Depending on when you made your 2.0 purchase, *some* of your original booklets may already contain *some* of these corrections, while others in your set may not. This booklet is a *complete* listing of all the changes we have made.

Changes to the CorelDRAW User's Manual

Page 5

During the installation of version 2.0, you'll be asked whether you wish to install the Samples files, **not** the Clipart libraries as stated in the manual. Installing the Clipart libraries is done separately, usually after CorelDRAW has been installed. For procedures to install the libraries, refer to the section in this booklet on *Changes to the Clipart & Symbols Libraries Catalog*. Note that once unarchived, the entire clipart collection requires about 9 megabytes of disk space.

Page 25

Holding down the SHIFT and CTRL keys while dragging, stretches or scales the object in increments of 100% from its center.

Page 26 (New Feature: "ShowObjectWhenMoving" variable in CORELDRW.INI)

When moving several objects at once, you may find that the redraw which occurs each time you pause, slows you down. If you prefer, you can have objects redraw only after you've release the mouse button. For details, see the section describing changes to pages 73-75 of the *Technical Reference Guide* elsewhere in this booklet.

Page 27 (New Feature: Leaving a Copy of an Object while moving the Object)

Any time while moving an object, you can leave a copy of it behind in its original position by pressing the right mouse button during the move. This works even if you've assigned another function to the right button via the *Mouse...* option in the *Preferences* dialog box.

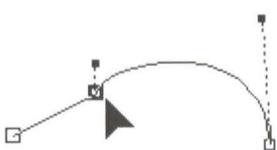
Page 29

Add the following information to the section on *Rotating and Skewing Bitmaps*:

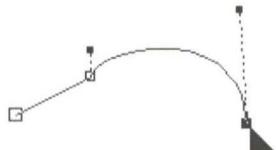
"Note that if you rotate a bitmap and then copy or cut it to the clipboard, Windows may become locked up. This is a problem with Windows 3.0 and is under investigation."

Page 62

The two graphics at the top of the page accompanying the section *Changing a Straight Line to a Curve* should be the ones shown here.



Selected line node is hollow



Selected curve node is solid

Page 67

You can nudge an entire line of text in a block of Paragraph text if you use the Shape tool to select the first character in the line, hold down the SHIFT key, then marquee select the remaining text in the line. If the paragraph has None selected as its Justification option, you can nudge the line up, down, left or right. Otherwise you can only nudge the line up or down.

Page 93

Holding down the CTRL key while moving control points forces them to move in increments of 15°. You can change this angle via the *Lines & Curves* button in the *Preferences* dialog box.

Pages 102 & 103

You can draw *exact* squares and circles from the center out by holding down the CTRL and SHIFT keys while drawing.

Page 106

As the example in the manual shows, if you skew Paragraph text, only the margins skew, the text itself does not. You can attempt other transformations such as rotating and mirroring, but bear in mind that these can give unexpected results.

Page 111

Add the following after the first sentence in the second paragraph under the *Paste* subheading:

"This works only in the 250 character text mode."

Page 116

Correction to KEYBOARD SHORTCUTS note: Pressing F12 with no objects selected displays the '*New Object*' *Outline Pen* dialog box, **not** the *Uniform Fill* dialog box as stated.

Page 119

Because round line caps project beyond the endpoints of the dashes, it is not possible to create dotted lines with perfectly round segments. At best, the segments will have an oval or cigar-shaped appearance which becomes more pronounced as the thickness of the line is increased.

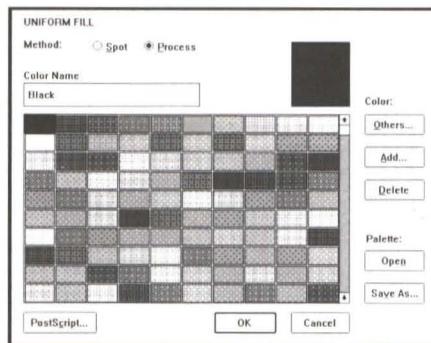
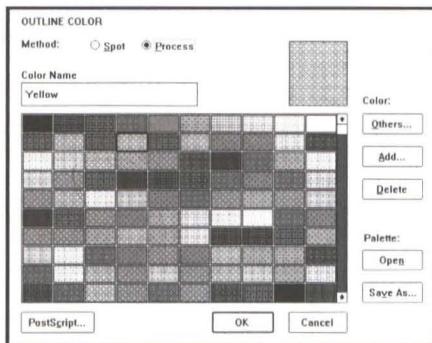
Page 126

Under *Hairline & Other Line Widths*, selecting widths from the *Outline* flyout menu does not change the shape of the pen; only the *Angle* and *Stretch* values change as described.

Pages 129, 131 and 150 (New Feature: Modifying, Saving and Loading Palettes)

The *Outline Color* dialog box appearing on pages 129 and 131 has been revised as shown below, to allow you to modify, save and load different color palettes. The same modifications have been made to the *Uniform Fill* dialog box, also shown below, and described on page 150.

On the right side of each dialog box are a series of buttons arranged in two groups: **Color:** *Others*, *Add*, *Delete* and **Palette:** *Open* and *Save As*.



Clicking on *Others* displays another dialog box where you can define a custom color that's not in the existing palette. The controls in this dialog box operate as described in the manual. Note, however, that there's no need to assign a name to the color you create unless you want it added to the end of the palette. The usual procedure for adding custom colors to the palette involves using the *Add* button as follows: (1) click on the square where you want the color added; (2) click on *Add*; (2) define the color using one of the three color models; (3) type a name in the *Color Name* box; (4) click on *OK*.

The *Delete* button allows you to remove colors from the current palette. To save a palette you've modified, click on *Save As* and enter a *File name*. **Do not change the path however.** In this version of CorelDRAW, all palettes must reside in the CorelDRAW directory. If you change the path, a 0-byte file will be created in the chosen directory, but

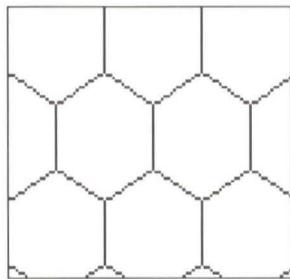
the modified palette will still be saved to the CorelDRAW directory. You can create as many custom palettes as you want and recall them when needed via the *Open* button. A single Spot color palette (CORELDRW.IPL) and several different Process color palettes (e.g. PURE225A.PAL, PURE225B.PAL, etc.) have been loaded into your CorelDRAW directory. The default Process palette that is loaded when you installed the program is named CORELDRW.PAL. Another palette, PURE99.PAL, is provided as a backup to the default one. They both contain the same colors, so if you modify CORELDRW.PAL, you can always return to the default colors by loading PURE99.PAL.

Page 130 (New Feature: Pantone Ink Colors "Search" function)

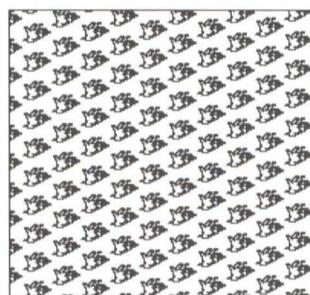
A *Search* field has been added to the dialog box that appears when you're filling or outlining an object with Pantone Spot colors and click on the *Others* button. This function is used for selecting Spot colors by name. *Search* lets you find a color by typing some part of its name. As you type, the list box scrolls automatically to the color that most closely matches what you type. For example, if you type "or" the color "Pantone Orange 021 CV" will be highlighted. (Note, you do not need to type the word "Pantone".)

Page 152

In some versions of the manual, the captions under the following graphics are missing:



Making the tile size too large can cause patterns with diagonal lines to look jagged.

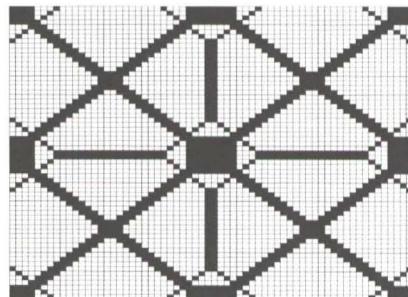


Making the tile size too small can cause the pattern to appear smudged.

Page 154

Some versions of the manual are missing the graphic shown to the right, above the caption that reads:

"Use 32x32 or 64x64 when you want to create patterns with diagonal lines or intricate designs."

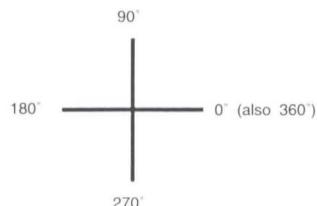


Page 160

Note the following additional information concerning *Fountain Fills*. Controls found in the *Print Options* and *Print & Preview* dialog boxes determine the number of stripes printers use to produce fountain fills. The latter also affects the way CorelDRAW displays fountains in the Preview window. For details, see the corrections for page 182 and 282 further on in this booklet.

Page 161

Under *Fountain Angle*, delete the second sentence and add the following to the end of the first paragraph:
“The angle increases from 0° counterclockwise to 360° , as shown in the illustration to the right.”



Page 167

Change the last sentence in the first paragraph under the *Open* heading to read:
“CorelDRAW remembers the subdirectory in which you last opened or saved a graphic, unless it was on a floppy disk.”

Page 169

In the fourth bullet, the example showing how to specify more than one file by placing a comma between the file specs should read “C:*.CDR,*.*PAT”.

Page 170

While you're working on a drawing, a backup copy is made at regular intervals and whenever you save the drawing with the *Save* or *Save As* commands. You can program the length of the interval, or turn it and the other auto-save feature off. For more information see “CorelDRAW Software-Related Information” in the *Technical Reference Guide*.

Page 175

The use of the *Include All Artistic Attributes* option in the Export dialog box is not described in the User's Manual. This option becomes available when exporting to certain formats such as CGM and GEM. Selecting the option permits the exportation of as many of CorelDRAW's drawing effects as possible. If the option is **not** selected, a number of simplifications may be performed to the export file. For detailed information about this option, refer to the descriptions of the export file formats in the *Technical Reference Guide*.

Page 179

Change the second sentence in the third paragraph to read:
“If you have specified non-default screen settings for an object with Spot color and then convert the color to its CMYK equivalent, the settings will be ignored.”

Page 180

Add the following under the *Crop Marks & Crosshairs* subheading:

“Note that your drawing’s working page size must be smaller than 8.5 x 11 inches (or whatever paper size you are printing on) in order to have the crop marks and crosshairs print out on the page. Set your *Page Size* to be at least an inch shorter (horizontally and vertically) than your paper dimensions, in order for this information to appear.”

Page 182

The last paragraph should read as follows:

“An option in the *Preferences* dialog box allows you to adjust the number of stripes non-PostScript printers use to print fountain fills. The same option also determines the number of stripes CorelDRAW uses to represent fountain fills in the Preview window. For more information see “*Preferences, Print & Preview*” in the SPECIAL Menu section.”

Page 184

Substitute the following for the description of the *Default Screen Frequency* feature:

“The two options, *Device’s* and *Custom*, let you select a screen frequency based on whether you’re printing composites or color separations.

Composites: If you’re printing composites, choose *Device’s* if you don’t want CorelDRAW to send commands to the printer to set the screen frequency. The screen frequency will be determined by the particular PostScript printer you are using. Different printers will have different default screens, depending on the printer’s resolution. For example, the 300 dpi Apple LaserWriter has a default screen of 60 lines per inch (lpi), while PostScript typesetters capable of printing at 2540 dpi have higher default screen values. If you’re unsure of the printer’s default screen value, or wish to use a different one, then select the *Custom* option and pick the value you want from the list.

Color Separations: If you’re printing color separations and want to use a screen frequency other than 60, you *must* specify it with the *Custom* option.”

Page 184

Add the following under the *Print to File* subheading:

“Images printed to file always use a default screen frequency of 60 lpi. If you want a different frequency, specify it using the *Default Screen Frequency Custom* option before creating the print file.”

Page 188

Add the following to the end of the second paragraph under the *Print Merge* feature:

“Note, however, that individual character attributes (character angle, vertical shift, bold etc.) may not be maintained in the merged text. Specifically, only characters that precede the ones you edited will retain their attributes; those that follow will take on the attributes assigned to the entire text string.”

Page 192

Add the following line under the *Add Page Frame* subheading:
“To remove a Page Frame, select it with the tool, then press the Delete key.”

Page 193

The *Paper Color* option in the Page Setup dialog box is also saved in the CDCONFIG.SYS file when you exit CorelDRAW.

Page 197 (New Feature: Duplicating an Object directly behind the original)

Copies of objects created with the *Duplicate* command in the EDIT menu are offset *up and to the right* of the original, **not** to the lower right as stated. In addition, pressing the "+" key on your numeric keyboard now produces a copy **directly behind** the original.

Page 208

Change the last paragraph to read:

“When applied to a group, the *Clear Transformation* command clears only transformations made to the group, **not** those made to the objects before they were grouped.”

Page 222

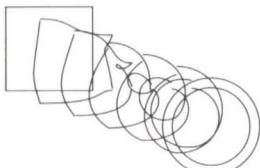
Add the following after the *Map Matching Nodes* subheading:

Blending Objects with Unequal Numbers of Subpaths

When objects with unequal numbers of subpaths are blended some or all of the intermediate shapes are drawn as open paths rather than closed ones. In such cases, the intermediate shapes may not appear when printed or previewed. At other times the object's fill may fail to blend completely resulting in a series of outlined shapes.



The editing window view on the left and the preview on the right shows the results of blending two objects with equal numbers of subpaths. Compare this with the example below in which the objects have an unequal number of subpaths. Notice the intermediate shapes are drawn as open paths.



If neither of the blended objects has an outline the intermediate shapes won't print nor will they appear in the preview window.



Here one of the objects has been given an outline prior to blending. Note that since the intermediate shapes are open paths the fills did not blend.

Page 226

The maximum *Scaling Factor* is 400, **not** 200 as stated.

Page 227

Add the following paragraphs under the ARRANGE menu, before the command explanations:

"The first five commands in the ARRANGE menu are used to rearrange the order of objects in a drawing. As objects are added, they are placed by default, on top of the existing objects. You can think of a drawing then, as series of layered objects stacked on top of each other. This layering is evident when you print or preview overlapping objects, one of which has a fill or an outline that's different from the other. If objects don't overlap, the layering isn't apparent and hence neither is the effect of changing their order.

As well, since you can't always tell which object is on which layer—especially in a complex drawing—rearranging their order to achieve a certain result may require repeated use of the ARRANGE commands. A partial remedy for this problem is to send the object in question to the front or back of the stack and then work it forward or backward through the individual layers.

Note that grouping objects puts them on the same layer."

Page 231

The limit on the number of nodes and control points for individual objects is about 400 for PostScript printers.

Page 234

In some versions of the manual, the heading "Creating Clipping Holes or Masks" is missing from the very top of the page. Note also, when printing masks to a PostScript printer, the masking object is limited to about 125 nodes, **not** 400 as stated.

Page 240

Change the beginning of the second-last paragraph to read:

"Regardless of the alignment chosen, *the last object selected maintains its position; all others move to align with this object*. If you marquee the objects instead of clicking on them individually with the mouse, CorelDRAW will ..."

Page 242

Add the following to the bottom of the page:

"If you need to edit text that's been fitted to a path, be aware that the text may need to be refitted to the path, especially if characters were added or deleted."

Page 250

Add the following to the end of the first paragraph under the *Grid Origin* subheading:
“The default *Grid Origin* coincides with the bottom left corner of the printable page.”

Page 253

You can have as many as 50 guidelines in the Editing window at one time.

Page 266

Add the following to the end of the second paragraph under the *Extract & Merge Back* heading:

“Note that individual character attributes (character angle, vertical shift, bold etc.) may not be maintained in the merged text. Specifically, only characters that precede the ones you edited will retain their attributes; those that follow will take on the attributes assigned to the entire text string.”

Page 274

Add the following to the end of the first paragraph under the *Create Arrows* heading:
“You can have up to 100 different arrows saved in the arrows file. If you already have this many in the file and want to create some new ones, you’ll have to delete some of the existing ones first.”

Page 277

If you specify a *Nudge* value between 0.001 and 0.009 inches, you’ll notice when you open the *Preferences* dialog box again, that the value seems to have been reset to 0.00. In fact, it is only the display that has been reset; the actual value remains set at the value you specified within that range.

Page 282

Replace the entire description of the *Preview Fountain Stripes* feature with the following:

“This option determines the number of stripes used to represent fountain fills in the preview window and on non-PostScript printers. Selecting a lower value (i.e., less than 20) improves the redraw and printing times but results in a fountain with noticeable banding. If you’re exporting the drawing as a SCODL file, the value you select will have the same effect on the appearance of the fountain.

A separate option in the *Print Options* dialog box controls the number of stripes PostScript printers use to print fountains. For details, refer to the FILE Menu section under “Print....”.

Page 283

Add the following to the end of the *Preview Colors* sub-section:

"If you change the *Preview Colors* settings in the *Print & Preview* dialog box, you'll need to update the palette along the bottom of the screen. To do this, just click on either of the palette's scroll arrows with the right mouse button."

Page 285

Add the following to the end of the *Optimized Palette with Pure Colors* sub-section:

"Note that although colors in the optimized palette always preview as pure, some may display as dithered in the palette along the bottom of the CorelDRAW screen and in the *Outline Color* and *Uniform Fill* dialog boxes. This is the case even when the palette loaded from either of these dialog boxes contains only pure colors."

Appendix A: Page A-24

The *Waves PostScript* texture can be made transparent if you enter a negative number for the *BackgroundGray* variable.

Appendix B

If you're having trouble locating a book listed in the bibliography, try contacting the publisher at the following address:

Pocket Guide to Color Reproduction
3100 Bronson Hill Road
Livonia, NY, 14487

Color and Its Reproduction
4615 Forbes Avenue
Pittsburgh, PA, 15213-3796

Pocket Pal
P.O. Box 100
Church Street Station
New York, NY, 10008-0100

Principles of Color Proofing
P.O. Box 170
Salem, NH, 03079
603-898-2822

The Print Production Handbook
1507 Dana Avenue
Cincinnati, OH, 45207
513-531-2222 in the U.S.
416-293-1911 in Canada (McGraw Hill Publishers)

Changes to the Technical Reference Guide

The following changes have been made to the Technical Reference Guide.

Page 9

With regards to the *Windows Screen Capture* facility, you may capture all or part of your screen. Pressing *Print Screen* will capture the entire screen and place a bitmapped representation of it into the clipboard. Pressing and holding the *Alt* key and then pressing *Print Screen* will cause only the currently-active application window to be placed into the clipboard.

Page 13

Replace the text under the *Limitations* heading with the following:

“Since CDR files are CorelDRAW’s native format, there should be no limitations or alterations to the contents of such a file on importing it to CorelDRAW’s 2.0 version. However, there is one slight variation you may notice. If you’re importing a file created in version 1.XX and that file contains text, some of the intercharacter spacing may appear a bit off. This happens to certain typefaces because the kerning values have been adjusted. For most drawings, this will probably not matter. However, if you’ve created a tight design, with letters immediately adjacent to other graphics elements, or text fitted to a curve, you may then notice the effect. To correct it, you’ll have to go into the *node edit* mode and manually adjust character spacing. In the text on a curve situation, simply straighten the text and refit it to the curve.”

Page 14

- a) The following has been added to the DXF import function to suggest an alternate import format if you find that your AutoCAD DXF file is too complex to bring into CorelDRAW. If you’re running into this problem, then try configuring your AutoCAD output device as an HP7475 plotter. Once you’ve done that, perform a plot-to-file of your drawing. You should then be able to import this plot file using the HPGL import filter.
- b) In the first bullet under the *General notes and limitations* heading, the image area has been expanded from 12" by 12" to 17" by 17". Note also that if the DXF file does **not** contain “drawing extents” information in its header, CorelDRAW will not load the file.
- c) In the fifth bullet under the same heading, dashed patterns in the DXF file are now all assigned a standard dashed pattern in CorelDRAW. This pattern consists of a sequence of 3-unit-long dashes followed by 5-unit-long spaces.

Page 15

The third bullet from the top of the page has been changed to read:
“Solids and traces are filled, provided the view is not a 3-D view (ie/ they’re filled on plan x-y axis view only)”

Page 16 (New Feature: Expanded list of DXF-supported typefaces)

The list of DXF-supported typefaces that can be imported into CorelDRAW has been expanded to include the following:

DXF typeface	CorelDRAW typeface	Similar to:
Gothic	Frankenstein	Fette Fraktur
Monotext	Monospaced	Letter Gothic
Symath	Symbols	Greek/Math Symbols

Page 19

- a) To the end of the section on *PCX Bitmaps*, add the following line:
“CorelDRAW imports PCX files conforming to the 2.5, 2.8 and 3.0 specifications.”
- b) To the end of the section on *TIFF Bitmaps*, add the following lines:
“TIFF files employing LZW compression cannot be successfully imported. CorelDRAW imports TIF files conforming to the 5.0 specification.”

Page 26

Add the following paragraph to the end of the section entitled *Importing HPGL files into CorelDRAW*:

“Note that it is the *current* view in AutoCAD that will be written to a PLT file. You should therefore set up the view you would like to bring into CorelDRAW before creating the PLT file.”

Page 27

- a) Disregard the text under the *Text* subheading. Replace it with the following:
“Text in an HPGL file will come into CorelDRAW as editable text. All text strings will be assigned the *Monospaced* font. Once in CorelDRAW, the text can subsequently be assigned any typeface and size. Note also that imported text has **no** outline color assigned to it, only fill. The fill color is based on its associated pen number in the original HPGL file.”
- b) Disregard the text under the *Line Types* subheading. Replace it with the following:
“CorelDRAW supports numerous types of dotted, dashed and solid line types. The pattern number of a certain line in an HPGL file will be translated to a CorelDRAW line type pattern as per the table on the following page.”

<i>HPGL line:</i>	<i>CorelDRAW line type:</i>
#0	Solid
#1	Dotted
#2	Small dash
#3	Large dash
#4,5	Dot-dash
#6	Double dot-dash
#7 and over	As per #2

Page 31

Add the following subheading and text to the bottom of the page:

Arrowheads and Dashed Lines

These are not supported from MacDraw II into CorelDRAW.

Page 32

a) Disregard the entire second paragraph under the *Limitations* heading. Replace it with the following:

"Text contained in the file will come in as editable text. Note that any Lotus "Title" text will come in as the *Toronto* typeface in CorelDRAW. Any Lotus "non-Title" text will come in as the *Monospaced* typeface. You can, of course, change either of these typefaces to anything you want."

b) The final sentence on the page should read:

"The colors contained in a PIC file are translated to a series of 8 gray shades."

Page 33

The phone number listed for Computer Presentations, Inc. should read: 513-281-3222.

Page 36

Add the following under the *Export Suggestions* heading:

"Note that fountain fills may be exported to a variety of formats. However, the export of *radial* fountain fills in particular can sometimes take a **long** time to perform. This is also true when trying to copy a fountain fill to the clipboard. One way around this problem is to use the *Blend* feature instead of radial fountain fills. You can achieve the same effects as a radial fill by blending two objects, each with a different color. Those colors would be the same ones you would choose as your *start* and *end* colors when performing a radial fill. The two blend objects should be exactly the same shape, but of different sizes, with one inside the other. By moving the inner (smaller) object around with respect to the center of the outer object *before* performing the blend, you can also simulate the effect of an offset radial fill. Also before blending the two objects, turn off their outlines, or else these will appear in the blended objects, leading to undesirable results."

Page 38

- a) The last sentence in the second paragraph should read:
“If you don’t, the font will be converted to the first font in the font list on a system running version 1.2 or earlier. This will probably be Avalon.”
- b) Replace the text under the *Limitations* heading with the following:
“Since CDR files are CorelDRAW’s native format, there are no limitations or alterations to the contents of such a file on exporting it to CorelDRAW’s 2.0 version. However, if you export it to the CorelDRAW 1.XX format, some of the features introduced in version 2.0 will not be recognized. These include the following:

- Bitmap and vector fill patterns. These will be exported as gray shades.
- Dotted and/or dashed lines will all be exported as CorelDRAW 1.XX dashed lines.
- All custom line arrowheads exported from version 2.0 to 1.XX will be converted to the only standard arrow line cap that was available in the earlier versions.”

Page 39

Add the following paragraph after the last paragraph on the page:

“Note: This option only applies to the MAC version of Illustrator. In the PC version, text is always converted to curves.”

Page 41

Disregard the text after the *Character attributes* bullet heading. Replace it with the following:

Character attributes. When reading an AI file into the MAC version of Illustrator, the format does **not** support *individual* character attributes (i.e. attributes assigned to single characters within a text string) such as: rotations, kerning, vertical shifts, etc. If such information is encountered in a text string, the character will *appear* to have the attribute applied to it, but in fact, the whole text string will have been converted to curves. It will no longer be editable text. In the PC version of Illustrator, the text is always converted to curves, so it doesn’t matter what attributes you apply to any of the characters.

Page 42

Add the following line to the end of the first paragraph:

“CorelDRAW exports PCX files conforming to the 2.8 specification and TIF files conforming to version 5.0.”

Pages 44-45

Disregard the contents under the *Fountain Fills* subheading and replace them with:
“Fountain fills are supported in the CGM format.”

Page 46 (New Feature: 256-color export option)

- a) Add the following material to the *Exporting DXF files* heading, after the sentence: "The directory and filename may then be specified."

"Once the name is specified, the following dialog box appears:



This allows you to specify the way in which the colors you used in CorelDRAW are translated and defined in the DXF file. The colors may be matched to either the standard 7 colors available in DXF or to the 256 color scheme AutoCAD uses for the IBM Professional Graphics Controller. You should try the Full Colors (255) option first. This will yield a truer representation of your CorelDRAW file ... if it works properly. The problem we have found with this approach is that it is highly device-dependent. As a result, the colors may turn out to be very poorly matched. If that occurs with your configuration, go back to the original CorelDRAW file and try the export again, this time using the Standard Colors option. This should work well, however, you must realize that a severe color limitation exists here. In CorelDRAW you can specify up to 16.8 million colors, and with this filter, you're limited to 7 colors! If your configuration demands that you use this option, then try to keep the colors you use in your CorelDRAW file to a minimum, and preferably, use only primary colors."

- b) Change the second bullet under the *Notes on exported DXF files* section to read:
"Calligraphic pens are not supported in DXF. Any such lines will be exported as hairlines."
- c) Add the following bullet under the *Notes on exported DXF files* section:
"Any objects in your CorelDRAW file that have **no** outlines, will have an outline appended to them in the DXF export process, since this filter deals with outlines only. Previously, any such objects were not exported to the DXF file."

Page 47

Delete the second bullet under the heading: *CorelDRAW features not supported in DXF*. Refer to the new material added to Page 46 for an explanation of how colors are handled.

Page 52

Under the *Fountain Fills* heading, disregard the portion in the first paragraph beginning with "Furthermore, only ..." to the end of the paragraph, and all of the second paragraph. Replace this with the following:

"While the clipping algorithm employed by CorelDRAW does allow fountains, these can often appear quite coarse in GEM. This is due to the limited color availability."

Page 56

Add the following subheading and text to the bottom of the page:

Unoutlined objects in your CorelDRAW file

Note that any objects in your CorelDRAW file that have **no** outlines, will have an outline appended to them in the HPGL export process, since this filter deals with outlines only. Previously, any such objects were not exported to the HPGL file.

Page 63

Change the second bullet to read:

- "PostScript textures are not supported in the WPG format."

Page 65

Insert the following subheading and paragraph just before the *Aspect Ratio* heading:

Optimizing your Output

If you're creating a file with the intention of sending it to a SCODL slidemaker, then you should optimize your screen display for the best possible result. Refer to the "*PAN Files" item in the *Hardware-related Information* section of this reference. Use one of the RGB PAN files, since the film recorder (ie/ picture tube) is an RGB device.

Page 66

a) In the first sentence of the second paragraph, "... select *Slide* as your page size" should read "... select *Landscape* and *Slide* as your page size".

b) Insert the following after the third paragraph:

"Note that if the file you're working on is in portrait orientation, there is no problem producing a slide with this orientation. However, before exporting it to SCODL, you must use the *Landscape* and *Slide* page options and use the *Select All* command in the EDIT menu. With all objects selected, apply a 90° rotation (either clockwise or counterclockwise) to get all elements into the landscape orientation required by SCODL."

Page 68

a) Under the *Page Size* subheading, change "... set to the *Slide* option ..." to read "... set to the *Landscape* and *Slide* options ...".

b) Refer to the (b) correction listed for Page 66 on how to produce slides with a portrait orientation.

Page 73

In the list of required files in the <application directory>, delete the line:
"PROLOG.PS: PostScript prolog file" and replace it with:
"WFNBOSS.CSD: Ancillary information file for Bitstream fonts (this must be in the same directory as WFNBOSS.EXE)"

Pages 73-75 (New Feature: Enhanced Program Customization)

Add the following to the list of variables that appears under the *CDrawConfig* section of the CORELDRW.INI file:

[CDrawConfig]

Names and values between angular parentheses (<>) may be changed by you to customize the operation of the program.

```
[CDrawConfig]
AutoBackupDir=<backup files directory>
ShowObjectWhenMoving=<0 or 1>
BigToolbox=<0 or 1>
BigPalette=<0 or 1>
LaserHalftoning=<0 or 1>
ClipboardFountains=<0 or 1>
INKPalette=<filename.IPL>
CMYKPalette=<filename.PAL>
PSComplexityThreshold=<20 to 1000>
OldPrinterDriver=<0 or 1>
```

These variables control the following:

AutoBackupDir:

This must be the full path, including drive. The installation procedure will automatically create a directory called AUTOBAK (under the CORELDRW directory). This will contain the automatic backup files (*.ABK) that CorelDRAW creates if the automatic backup feature (AutoBackupMins) is enabled. If this directory is not specified and the automatic backup feature is enabled, the backup files will be placed in the directory where CORELDRW.INI resides. The automatic backup file created by CorelDRAW is used to restore the most up-to-date working copy of the file you're currently working on, in the event that Windows crashes or your system hangs. The program creates the .ABK file at intervals you specify by setting the *AutoBackupMins* parameter (see below). If you need to recover a CDR file, simply reboot your computer after a crash/hang and then go into the CORELDRW\AUTOBAK directory. Rename *filename.ABK* to *filename.CDR*. You will then be able to open the file in CorelDRAW. Automatic backup files are deleted by CorelDRAW whenever you perform a SAVE or SAVE AS, whenever you select NEW, or whenever you exit the program using the QUIT command.

ShowObjectWhenMoving:

This variable allows you to specify whether or not the outline of an object that is being moved is redrawn while you're moving it. Sometimes with complex objects or bitmaps, the redrawing of the outline can slow you down, so you may want to turn that function off. Selecting 0 here turns the redraw off; 1 turns it on.

BigToolbox:

Setting this variable to 0 selects the standard-sized toolbox; 1 selects a larger version, useful if you have a large, high-resolution monitor such as the Sigma Laserview or similar.

BigPalette:

Setting this variable to 0 selects the standard-sized palette; 1 selects a larger version, useful if you have a large, high-resolution monitor such as the Sigma Laserview or similar.

LaserHalftoning:

This function directs the way halftoning is performed on non-PostScript laser monochrome printers such as the HP LaserJet. The value 0 directs the printer to use its own halftoning patterns; 1 overrides the printer's patterns and uses ones supplied by CorelDRAW.

ClipboardFountains:

This function allows you enable or disable high-quality copying of *radial* fountain fills to the clipboard. Setting the value to 1 will produce the best quality copies when pasting the fountain fills down into another application for printing on a PostScript printer. However this function can take a **long** time to perform. Setting this variable to 0 will speed up copying to the clipboard. This savings in time however, will usually result in unsatisfactory quality when pasting radial fountains back down from the clipboard into the other application and then printing them. One way around this problem is to use the *Blend* feature instead of radial fountain fills. You can achieve the same effects as a radial fill by blending two objects, each with a different color. Those colors would be the same ones you would use as your *start* and *end* colors when performing a radial fill. The two blend objects should be exactly the same shape, but of different sizes, with one inside the other. By moving the inner (smaller) object around with respect to the center of the outer object *before* performing the blend, you can also simulate the effect of an offset radial fill. Also before blending the two objects, turn off their outlines, or else these will appear in the blended objects, leading to undesirable results. Another solution to the problem is to avoid trying to copy radial fills to the clipboard in the first place. If your other application can read EPS files, export your drawing from CorelDRAW in that format, then import the EPS file into the other application.

INKPalette:

This defines the last *spot* color palette file used in CorelDRAW. This entry is automatically updated by CorelDRAW every time you exit the program. The program will then use this

file the next time it is started up. The initial spot color palette is CORELDRW.IPL, which is the Pantone spot color reference file.

CMYKPalette:

This defines the last *process* color palette file used in CorelDRAW. This entry is automatically updated by CorelDRAW every time you exit the program. The program will then use this file the next time it is started up. The initial process color palette is CORELDRW.PAL, which is actually the same as the PURE99.PAL file.

PSComplexityThreshold:

This variable is used to alter the threshold at which CorelDRAW decides a filled path is too complex for successful printing on a PostScript device. It is a count of the number of nodes in an individual path and should be set for a value between 20 and 1000, with the default being 600. If an individual path contains more nodes than the limit set here, the program will break it up into simpler ones, without modifying the appearance. Note that even shorter paths (eg/ 300 nodes or less) containing complex fills such as fountain fills, vector(bitmap fills, can cause problems with a PostScript printer (typically indicated as a *Limitcheck Error*). If this occurs, reset the variable to a lower value, such as 200 or 300.

OldPrinterDriver:

This variable allows you to specify whether or not to use older versions of certain printer drivers. Some printers, notably the HP PaintJet, have problems filling certain characters or shapes. By setting this variable to 1, CorelDRAW will be directed to use an older polygon drawing technique to fill objects. If you have a newer driver, one that supports all the Windows 3.0 GDI calls, then set this variable to 0. The default value is 0.

Page 75

Under the *CorelDrwFonts* subheading, add the following to the end of the section: "You can have up to 256 typefaces listed in the CORELDRW.INI file, provided that the total number of characters in their names does not exceed 4000."

Page 76

Under the *CDrawHPGLPenColor* subheading, change the first sentence to read: "This section is needed by the HPGL filters."

Page 77

a) Under the *CDrawImportFilters* subheading, change the sentence to read: "This section lists the external import filters. Note that CDR, PCX, TIF and BMP are internal main code filters and therefore do not appear on this list."

b) Under the *CDrawExportFilters* subheading, change the sentence to read: "This section lists the external export filters. Note that CDR, PS-EPS, WMF, PCX and TIF are internal main code filters and therefore do not appear on this list."

Page 77

Under the *CORELDRWSymbols* subheading, change the sentence following the list to read: "If you create your own libraries, they should be placed in the same directory and you will have to add their names to this section, as follows:"

Page 83

- a) Under the **.PAN Files* heading, in the second sentence, change the part that reads: "... printers or monitors listed below, copy the associated PAN file over your existing CORELDRW.INK file. Should you ..." to read:
"... printers or monitors listed below, close CorelDRAW and copy the associated PAN file over your existing CORELDRW.INK file. You can then re-open CorelDRAW. Should you ..."

- b) In the list of files, change the line:
"RGBMITSU.PAN: All monitors" to read
"RGBMITSU.PAN: Monitors using Mitsubishi picture tubes"
and add the line:
"RGBSONY.PAN: Monitors using Sony picture tubes"
- c) Add the following paragraph after the list of PAN files:
"Note that while the RGB*.PAN files will improve the onscreen representation of the Pantone colors, they will also dramatically reduce the quality of printed output. These files should only be used when creating drawings for export to slidemakers employing the SCODL format."

Page 86

- a) Disregard the text under the *Extended RAM* heading, and replace it with the following: "If you have extended RAM in your PC, we recommend that you do **not** set up a ramdrive to store your TMP files in. Ramdrives can only have a maximum size of 4 Megabytes, and CorelDRAW can create TMP files larger than that. Trying to write a TMP file to a ramdrive that exceeds its capacity will cause your system to hang."
- b) Add the following heading and text to the bottom of the page:

Math Coprocessors

CorelDRAW does **not** make use of math coprocessor chips. The presence of such a chip in your system will not affect the program in any way.

Page 89

Remove CGM and GEM from the list of affected formats.

Pages 90-91

Make the following changes to the text under the *Using the Temporary Drive* heading:

- a) Delete the reference in brackets to (20K to over 500K). The TEMP files can become **much** larger than this.
- b) Delete the text starting with "If you've got a ramdrive ..." to the end of the paragraph, and replace it with:

"Always ensure that the drive containing your TEMP directory has several megabytes of free space available. TMP files left in the TEMP directory after a system hangup or crash should be deleted."

Page 91

- a) Add the following to the end of the last sentence under the *Dirt on the Screen* heading: "... pressing Control-W, clicking on either scroll bar thumb, or pushing the spacebar."
- b) Delete the section on *Refreshing the Screen*. It is no longer applicable.

Page 95

Add the following note to the pointers under the *Small Text* heading:

- e) The font rasterizer will only be enabled if you are using text that has **no** outlines."

Page 119

Add the following new feature to the list under *Page Setup* for the FILE Menu:

- page setup dialog box can be accessed directly by double-clicking on a page border"

Page 120

Add the following new feature to the list under *Grid* for the DISPLAY Menu:

- grid setup dialog box can be accessed by double-clicking on a ruler"

Page 121

Add the following new feature to the list under the  *Tool - Curves*:

- add new nodes at a specific point on a curve"

Page 125

Add the following two pages to the end of the *History of Program Changes* section:

Version 2.01

Released: August 1991

Version 2.01 was released to correct a number of bugs introduced by the substantial modifications that were made at Version 2.0. In addition, a few new features were added in response to early feedback on 2.0 from our users.

New Features Added

Modifying, Saving and Loading of Color Palettes

Both the *Uniform Fill* and *Outline Color* dialog boxes have been enhanced to allow you to save customized color palettes. You may save as many custom configurations as you wish, and load any of them into the program using the Palette: *Open* button in the dialog boxes. *Add* and *Delete* buttons have also been added to the dialog boxes to facilitate the customizing of the palettes.

Pantone Ink Colors "Search" Function

A *Search* field has been added to the dialog box that appears when you're filling or outlining an object with Spot colors and click on the *Others* button. This function is used for selecting Spot colors by name. *Search* lets you find a color by typing some part of its name. As you type, the list box scrolls automatically to the color that most closely matches what you type.

Moving, Copying and Duplicating Objects

When moving an object, you can now leave the original copy of it behind by pressing the right mouse button. This works even if you've assigned another function to the right button via the *Mouse...* option in the *Preferences* dialog box. In addition, you can now duplicate any selected object by pressing the "+" key on your numeric keypad. The duplicate will appear directly behind the selected object.

Improved DXF Import and Export Filters

The list of DXF-supported typefaces that can be imported into CorelDRAW has been expanded to include Gothic, Monotext and Symath. In addition, you may now select the 256 color scheme AutoCAD uses for the IBM Professional Graphics Controller as the method by which CorelDRAW exports colors to the DXF format.

Enhanced Program Customization

A number of new switches have been added to the CORELDRW.INI file to allow enhanced program operation. Each of these are explained in detail in the changes to *Technical Reference Guide, pages 73-75* of this update booklet, but briefly, their functions include:

AutoBackupDir: Allows assignment of a unique directory that CorelDRAW will use to store the *AutoBackup* files it produces.

ShowObjectWhenMoving: Allows you to select whether or not object outlines are redrawn while you are moving them. Having the outlines redrawn can aid in positioning objects, but can also slow down program operation if the shapes are complex.

BigToolbox: Allows you to select a larger version of the toolbox, for use with high-resolution monitors.

BigPalette: Allows you to select a larger version of the color palette, for use with high-resolution monitors.

LaserHalftoning: Allows enhanced printing of halftones on non-Postscript monochrome printers such as the HP LaserJet.

ClipboardFountains: Allows you to select the quality of the radial fountain fills that are copied to the Windows Clipboard for transfer to other applications. High-quality copying can take a long time, and should be used for final work. Low-quality copying permits faster operation, useful for draft work.

INKPalette: This variable is used to store the name of the last *spot* color palette employed.

CMYKPalette: This variable is used to store the name of the last *process* color palette employed.

PSComplexityThreshold: This variable is used to alter the threshold at which CorelDRAW decides a filled path is too complex for successful printing on a PostScript device. This allows you to simplify objects, from the printer's point of view.

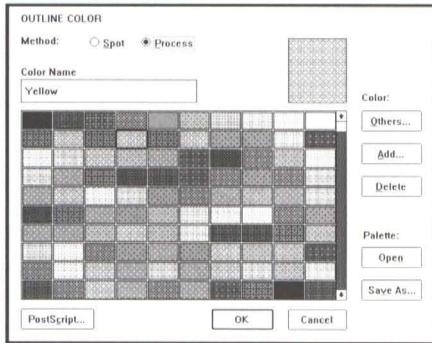
OldPrinterDriver: This variable allows you to specify whether or not to use older versions of certain printer drivers, for devices such as the HP PaintJet.

Changes to the Learning CorelDRAW Tutorial Workbook

The following changes have been made to the *Learning CorelDRAW Tutorial Workbook*:

Pages 58

The *Outline Color* dialog box has been replaced by the one illustrated to the right.



Page 59

Add the following three bullets to the group at the top of the page:

- *Add* also accesses the dialog box for mixing colors. You would use *Add* when you want to create colors and add them to the Palette. *Others* is normally used to fill an object with a custom color without adding it to the Palette
- *Delete* removes colors from the Palette
- *Open* and *Save As* let you load other palettes into CorelDRAW and save ones you've modified

Page 60

Delete the last sentence in paragraph #5 and replace it with the following:

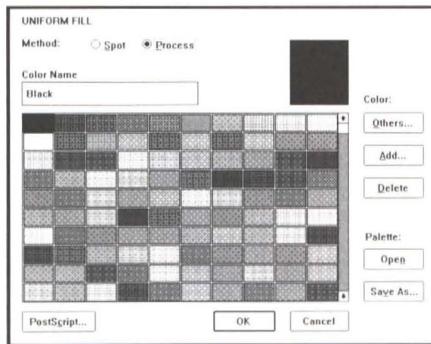
"Since we used the Others button to access the color mixing dialog box, there's no need to assign a name to the color. However, for the purpose of this exercise, type the name Mycolor in the Color Name box, but *don't* press the Enter key."

Pages 61

The *Outline Color* dialog box shown on this page has been replaced by the same one illustrated for the change to page 58.

Page 65

The *Uniform Fill* dialog box shown on this page has been replaced by the one illustrated below:



Changes to the WFN Typeface Conversion & Creation Guide

The following changes have been made to the WFN Type Guide:

Page 6

The WFN BOSS interface has been modified to permit easier selection of *Conversion Types*. Clicking on the down arrow at the right of the selection field produces a drop-down type of menu, which you can then scroll through for the desired conversion.

Page 7

a) Add the following to the end of the third paragraph:

“... current *Source* directory again. Only the first eight characters of the WFN font name appears in the list. All other types will display using the whole name. Also, the files will not necessarily be displayed in alphabetical order. They will appear as they do when doing a DIR command in DOS. You may sort your font directories into alphabetical order using Norton’s Utilities or similar programs.”

b) Add the following to the last paragraph, after the sentence ending with “... you can enter any name you wish here.” :

“The name may be up to 25 characters long, with **no** spaces.”

Page 8

Change the third paragraph to read:

“When the conversion is complete, the typeface is saved in the *Destination Directory* and the CorelDRAW font list in the CORELDRW.INI file is automatically updated (provided the *AutoInstall* option is selected). You may open CorelDRAW and use the newly-converted typeface immediately.”

Page 18

Add the following to the end of the first paragraph under the *Adobe Type 1 to WFN Format* subheading:

“You must also have the matching AFM file to do the conversion, otherwise an empty WFN file will be created. The AFM file contains the typeface’s kerning data.”

Page 19

The interface depicted on this page has been modified in the same way as described for the change to Page 6, above.

Page 20

Disregard the illustration and all text on this page beginning with the second paragraph, and replace them with the following:

"The *PostScript FontName* in the *New Font Data* field is a name suggested by the program that is used by the printer. This name is not alterable in WFN BOSS.

The *File Name* box shows the root name that will be assigned to the converted Type 1 files. Each of the .PFB, .AFM and .PFM files will have this as their root name. You can change this to read whatever you want, or leave the suggested name. You can however, only specify the first seven letters of the name. The eighth letter is reserved by the program, which will automatically place one of four letters into this slot. These will be either "N" for a Normal font weight, "B" for Bold, "I" for Italic, or "T" for Bold-Italic. Note that only the .PFB name will appear in this box, however all three types will be produced when the conversion proceeds.

Click on *Convert* or double-click on the desired typestyle to proceed, and another dialog box appears on the screen:



This box displays the typestyles available in the file you have chosen. Click on the one you want to convert. After selecting one, click on *OK* to begin the conversion. Note that if you click on *OK* without selecting a typestyle, the first font on the list is converted by default.

Note that the Corel Symbol fonts will also convert to Type 1. However, because those fonts start at character number 1, the first 32 characters will be cut off when converted, since Type 1 faces start at character 32. We are currently investigating ways around this. In the meantime, you could use the Symbol and Typeface Export filter (described in Section 2 of this guide) to export any of the number 1-to-32 characters to vacant slots *higher than 32*."

Page 25

The interface depicted on this page has been modified in the same way as described for the change to Page 6, above.

Page 26

Disregard the illustration and all text on this page and replace them with the following:

"The *PostScript Font Name* in the *New Font Data* field suggests a name that is used by the printer. This name is not alterable in WFN BOSS.

The *File Name* box shows the root name that will be assigned to the converted .OTL file. You can change this read whatever you want, or leave the suggested name. You can however, only specify the first seven letters of the name. The eighth letter is reserved by the program, which will automatically place one of four letters into this slot. These will be either "N" for a Normal font weight, "B" for Bold, "I" for Italic, or "T" for Bold-Italic. Click on *Convert* or double-click on the desired typestyle to proceed, and another dialog box appears on screen:



This box displays the typestyles available in the file you have chosen. Click on the one you want to convert. After selecting one, click on *OK* to begin the conversion. Note that if you click on *OK* without selecting a typestyle, the first font on the list is converted by default."

Page 27

The next section, **Using Converted Typefaces with Other Applications** is entirely new. The following five pages can be placed before the *Vendor Contacts* section:

Using Converted Typefaces with Other Applications

The following section provides a brief discussion on using WFN typefaces converted to Type 1 with the Adobe TypeManager and with GEM Ventura Publisher.

Adobe Type 1 fonts with Adobe TypeManager

WFN typefaces converted to Adobe Type 1 may be used with the TypeManager program. Add your new typefaces to TypeManager as described in the program User's manual. This is very straightforward and will give you excellent screen faces.

However, note that TypeManager assumes that the typefaces are always resident in your Postscript printer. You must manually edit your WIN.INI file in order to get your new Type 1 typefaces to download to the printer. To do this, you must first find the section where Windows keeps track of all your PostScript printer faces. You must then enter the path in which your PFB files are found, such as in the example below.

[PostScript,LPT1]

```
device=29
source=
feed3=1
feed4=1
feed15=1
orient=1
softfonts=9
softfont1=d:\psfonts\pfm\mtbi____.pfm
softfont2=d:\psfonts\pfm\mti____.pfm
softfont3=d:\psfonts\pfm\mtr____.pfm
softfont4=d:\psfonts\pfm\agw____.pfm
softfont5=d:\psfonts\pfm\agd____.pfm
softfont6=d:\psfonts\pfm\koalan.pfm,d:\psfonts\koalan.pfb
softfont7=d:\psfonts\pfm\antiqueb.pfm,d:\psfonts\antiqueb.pfb
softfont8=d:\psfonts\pfm\techncan.pfm
softfont9=d:\psfonts\pfm\techncai.pfm
```

Notice the path entered for the KOALAN and ANTIQUEB printer typeface files. These faces will now download to the printer whenever they are used. On the other hand, the TECHNCAN and TECHNCAI faces will **not** download and will therefore print in Courier (unless they have been previously manually downloaded to the printer).

If you are using a typeface quite often throughout the day, you may want to download the face to your printer at the beginning of each day and remove the reference to the PFB file under the Postscript printer section of your WIN.INI file. This could save a good deal of time.

Note that if you're using a non-PostScript printer with TypeManager, you will not have to go through these steps. TypeManager sends the text to the printer as a bitmap image. This can result in slow printing times, but the quality is exceptional.

WFN BOSS and GEM Ventura

The following is a brief explanation of the process involved in creating Adobe Type 1 printer fonts for use within the GEM version of Ventura Publisher.

Currently, WFN BOSS uses the name assigned to a typeface in the CORELDRW.INI file under the [CorelDrwFonts] section (e.g. Casablanca=15 casablca.wfn 0). This allows you to edit the CORELDRW.INI file and change the typeface names to suit your needs.

Convert the desired WFN typeface to Adobe Type 1, and WFN BOSS will create the appropriate AFM, PFM and PFB files. Probably the easiest thing to do in order to keep track of all the files you're about to produce is to set the *Destination directory* in WFN BOSS to be your Ventura directory.

The next two steps involve using two utilities packaged with Ventura. They are AFMTOVFM.EXE and VFMTOWID.EXE. These files are **not** automatically copied into your Ventura directory when you install that program. You must do that manually. They can be found on your Ventura Utilities disk. Copy them into your Ventura directory.

Once you've done that, you must first convert the AFM file to Ventura's VFM file format. To do this, go to DOS and in your Ventura directory type the following:

```
AFMTOVFM filename.AFM /F=FontName /N=FontNumber /W=FontWeight
```

The *FontName* must not exceed 15 characters. All *FontNumbers* **must** be unique, otherwise the new typefaces will overwrite your current ones. Use the *Face ID* number for the typeface you're converting. A table of these numbers for industry-standard typeface names corresponding to the Corel typefaces can be found at the end of this section. Another table showing the name equivalents appears on pages 2 and 3 of the WFN Type Guide. *FontWeight* parameters are specified as follows: "N" = Normal, "I" = Italic, "B" = Bold, and "T" = "Bold-Italic.

You may find that the AFMTOVFM command may not work properly. If you do not specify any parameters, AFMTOVFM will check the fontname in the AFM file, and if it recognizes it, will properly assign the *FontNumber* and *FontWeight*. If it does **not** recognize the name, a default of 2 will be assigned to the *FontNumber*; and "Normal" to the *FontWeight*. Unfortunately, the *FontNumber* of 2 also corresponds to the Helvetica typeface and would cause conflicts with Ventura. We highly recommend that you enter the AFMTOVFM command with all 3 parameters specified in order to get the fonts working properly with Ventura. This will ensure that all typefaces have unique numbers and their weights are properly assigned.

If you were to view the VFM file using an ASCII text editor, the parameters you specified above would appear in the locations shown in the example below.

```
DEVICE POSTSCRIPT
TYPEFACE PalmSprings F
FACEID N
SIZES 255
ATTRTYPE 1 W
UFACEID N
USTYLE 0
SFACEID N
SSTYLE 0
TOP 940
BOT 220
YMPY 12
YDIV 720
XMPY 12
XDIV 720
DEVSPEC PalmSprings-Normal/PALMSPRN
```

The diagram illustrates the mapping of various VFM parameters to their corresponding AFM parameters. Arrows point from specific VFM parameters to labels indicating the resulting AFM values:

- A single arrow points from `TYPEFACE` to *FontName F*.
- `FACEID N`, `SIZES 255`, `ATTRTYPE 1 W`, `UFACEID N`, `USTYLE 0`, `SFACEID N`, `SSTYLE 0`, `TOP 940`, `BOT 220`, `YMPY 12`, `YDIV 720`, `XMPY 12`, and `XDIV 720` all map to *FontNumber N* (from the ID table).
- `FontNumber N` maps to *FontWeight W* (*numerical equivalent will show up here*).

The next step is to convert the VFM file to a width table. You must first create a plain ASCII text file listing all of the VFM files you wish to convert. This file should be in the same directory as the VFMTOWID.EXE utility. Make sure the last line in the text file is a blank. Assign the file a *filename* and then type the following command:

VFMTOWID *filename*

This will create a width table with all of the fonts listed in your text file. VFMTOWID will use the text file's name when creating the width table file (*filename.WID*).

You now have two choices in Ventura: simply use the fonts in the new width table or merge it with an existing table. If you decide to merge your new width table, load the existing table first. You can do that using the *Load Different Width Table* command in the *Set Printer Info...* item under the *Options* menu. Once done, go again to the *Options* menu and choose *Add/Remove Fonts*, followed by *Merge Width Tables....*. You would then choose the new width table you just created. This will merge the new width table into the existing one.

If you do not wish to merge, simply load the new width table as described above. This will only let you access the typefaces in that width table. You can mark the faces as either *Downloaded* or *Resident*, both work well. But remember, you must first download your PFB files if you are setting them as Resident.

You can then use SoftType or any other such utilities to create matching screen fonts, since WFN BOSS cannot create these.

NOTE: The table on the next page shows the *Face ID numbers* for the industry-standard typeface names related to the CorelDRAW typeface families. Use your *Typeface Reference Chart* or the table on pages 2 and 3 of the *WFN Type Guide* to relate these numbers to the correct CorelDRAW typeface. Although 153 typestyles are supplied with CorelDRAW, many of these will have the same Face ID numbers. This occurs because all members of a certain typeface family will have the same ID number (e.g. Times-Roman, Times-Italic, Times-Bold and Times-Bold-Italic all have the same Face ID, namely 14). In addition, Ventura Publisher will accept any Face ID numbers up to 65,535. You may assign Face ID numbers above 256 to custom typefaces you create using the WFN Symbol/Typeface export filter. Further information on Adding Fonts for use in Ventura Publisher can be found in Appendix K of the Ventura 3.0 (DOS/GEM) Reference Guide.

Face ID's for Ventura Publisher

Aachen Bold.....	152
American Typewriter Medium ...	100
Arnold Böcklin	99
Avant Garde Book	51
Bauhaus Demi	185
Bauhaus Heavy.....	186
Bauhaus Light	185
Bauhaus Medium/Bold	184
Benguiat Book/Bold	26
Bodoni Poster	37
Bookman Light/Demi	23
BrushScript	41
Carta.....	132
Caslon 3 Roman	236
Caslon 540 Roman	232
Caslon Open Face	161
Century OldStyle	38
Cooper Black	8
Cottonwood.....	1015
Dom Casual.....	194
Eras Book.....	220
Eras Light.....	219
Eras Medium/Bold	221
FetteFraktur.....	102
Franklin Gothic Heavy	57
Franklin Gothic Roman	42
FreestyleScript.....	90
FrizQuadrata.....	28
Futura	251
Futura Condensed.....	248
Futura CondensedExtraBold	247
Futura CondensedLight	249
Garamond Bold	22
Garamond Light.....	22
Helvetica	2
Helvetica Black	55
Helvetica Condensed.....	126
Helvetica Condensed Black.....	60
Helvetica Condensed Light.....	58
Helvetica Light.....	54
Helvetica Narrow	50
HelveticaNserat Roman	76
Hobo	88
Ironwood	1014
Juniper	1013
Kaufmann	166
Letter Gothic.....	105
Linoscript	192
Linotext.....	193
Machine.....	101
Mistral.....	72
New Baskerville Roman.....	33
New Century Schlbk Roman.....	20
Optima	52
Palatino.....	21
Parisian	198
Park Avenue	35
Peignot Demi/Bold.....	158
Peignot Light.....	157
Ponderosa	1017
Post Antiqua	108
Present	77
Revue.....	89
Sonata.....	130
Souvenir Light/Demi	25
Stencil.....	151
Symbol.....	128
Tekton.....	1019
Tiffany Roman/Demi	18
Tiffany Heavy	19
Times Roman	14
Umbra	199
Univers Black	93
Univers Light	91
University Roman	7
VAG Rounded Thin	119
Zapf Chancery	29
Zapf Dingbats	129

Page 37

- a) In paragraph #3, change the bolded sentence to read:
"All characters exported to a single typeface must have the same basepoint, the 0,0 point of the rulers."
- b) In paragraph #6, change the second sentence to read:
"Next, move it towards the 0,0 basepoint."

Page 39

For the sake of consistency, if you happen to compare your screen with the illustration on this page, you will notice a discrepancy in the *Typeface Design Size* variable. For the Toronto (Times) typeface, your screen should indicate a value of 127. The illustration shows a value of 720. The value 127 is the correct one for this typeface.

Page 41

Add the following to the end of the *Typeface Design Size* paragraph:
"If you're modifying a character in an existing typeface, then enter here the point size value you specified when bringing the character onto the screen (ie/ if you called in the character at 400 points, then enter 400 points here). This does **not** affect the other characters in the set."

Page 46

Replace paragraph #1 with the following:

- 1) The first step is to follow the procedures previously detailed for modifying existing characters (see *Preparing your Object-Character*). Set up your page accordingly. You will then be bringing in character numbers 0101 and 0180 from an existing typeface (ie/ the face you're creating the indirect character for).

Note that you may **not apply any kind of transformations** to the characters you bring in. This includes scaling, rotations, skewing, etc. You must bring the characters in at the size you intend to export them at, and you are only allowed to move them around on the page, relative to each other.

Page 47

Add the following two bullets to the summary list at the bottom of the page:

- Do **not apply any kind of transformations** to the characters you bring in. This includes scaling, rotations, skewing, etc. You are only allowed to move them around on the page, relative to each other.
- Direct characters used to create indirect characters **must** be brought in at the size you intend to export them at.

Changes to the Symbol and Clipart Libraries Catalog

The following changes have been made to the *Symbol and Clipart Libraries Catalog*:

Clipart page (just before page 1)

Replace the second paragraph with the following:

"The clipart images profiled in this catalog are organized by category into various libraries and are accessed through the Corel MOSAIC program. In order to use them, they should be copied from the original floppy disks into a directory on your hard drive.

To do that, first create a new directory, such as: C:\WINDOWS\CORELDRW\CLIPART

Then use either DOS or a file management utility such as the Windows File Manager to copy the files from the floppy disks. Note that each library actually consists of **two** files with the same name, but different extensions, such as: "ANIMAL.CLB and ANIMALS.CLB". Both of these files **must** be copied into the same directory on your hard drive, or else you will not be able to properly access the files they contain. Once you have copied the files over, double-click on the MOSAIC icon in the *Corel Applications* Group in the Windows Program Manager. The MOSAIC interface will appear, and you may then select the library you wish to view. Open the files into CorelDRAW as desired. At this point, we suggest you consult the MOSAIC Visual File Manager guide for detailed operating instructions."

WYSvsWYG (What You See vs What You Get)

You may notice that some of the symbols available in the various symbol libraries may disagree with the listings shown in the *ClipArt & Symbols Catalog*. Symbols have been added and enhanced since the catalog went into print.

Changes to the MOSAIC Visual File Manager Guide

We have modified the user interface of the MOSAIC program quite substantially since its initial release. For that reason, you will have received a complete copy of the new MOSAIC Guide as part of this upgrade kit.

Changes to the CorelTRACE Guide

No changes were made to this publication.

Changes to the Typeface Reference Chart

No changes have been made to the chart, however, note carefully the following concerning the typefaces supplied with the 2.00/2.01 versions of CorelDRAW. Most of the typefaces in these versions that were also in releases prior to 2.00 have had their kerning altered slightly to optimize it. If you open an old file that uses one of the affected typefaces, you may notice slight displacements in the positioning of certain letters. In most cases, you will not notice the change. Where it may be most noticeable is in text strings that have been fitted to a curve. If the appearance of any such text is unsuitable when opening the file in version 2.01, then simply straighten the text and re-fit it to the path.

Overseas Correspondence

Mailboxes have been established in various corners of the world to facilitate communications between our overseas customers and COREL Systems. If you wish to send us mail, please direct it to one of the addresses listed on the next page that is closest to you. Once received at these addresses, the forwarding to COREL Systems typically requires only 2-3 days. If your needs are urgent, we suggest you fax us directly in Ottawa, Canada at 613-728-9790.

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* Contact our **Customer Service Group** at 613-728-8200 (FAX: 613-761-9176) for help with the following:

- Software upgrade and update information
- Disk and documentation replacement information
- All non-technical questions and issues

* COREL provides all registered software customers access to our Technical Support Hotline. If you require assistance with a technical matter, please refer to the CorelDRAW Technical Reference Guide for information on contacting our **Technical Support Group**.



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CorelDRAW Addendum Sheet

CorelDRAW Version 2.0

Please note carefully the following items. These were either modified or discovered after the CorelDRAW 2.0 documentation went into print.

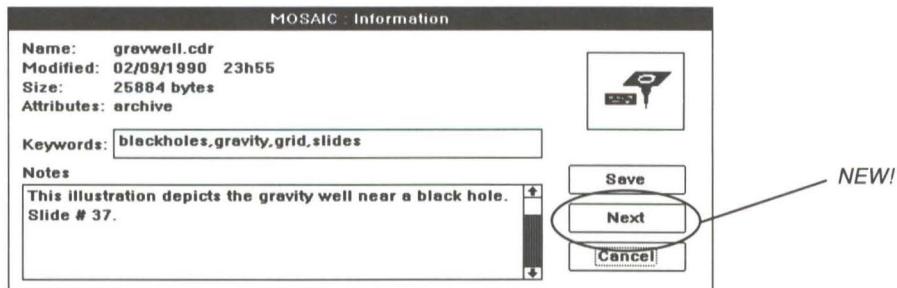
- We **strongly recommend** that you install CorelDRAW 2.0 from DOS, *not* from Windows. Exit Windows before commencing installation and insert Disk #1 into the appropriate floppy drive. Type: INSTALL and then press ENTER.
- If you intend to keep a previous version of CorelDRAW on your system, you must rename the older CORELDRW.EXE file to something else, e.g. "CDVER121.EXE". This is necessary if you intend to run two versions of the program, the "old" and the "new". If they both have the same names, then the second version of the program you open will be the same as the first. The two versions should also be located in different directories.
- Three new features that were added to this version of the program, but not listed in the New Features summary in the Technical Reference are:
 - 1) Nodes can now be added at a specific point on a curve with the  tool
 - 2) *SHORTCUT:* double-click on a ruler to access the grid setup dialog
 - 3) *SHORTCUT:* double-click on a page border to access page setup dialog
- Several color palettes (e.g. PURE225A.PAL, PURE225B.PAL, etc.) have been copied into your CorelDRAW subdirectory. If you wish to use any of these, just copy it over the existing file called CORELDRW.PAL. The CORELDRW.PAL that is installed initially is the same as the PURE99.PAL file.
- Most of the typefaces in this version that were also in previous releases have had their kerning altered slightly to optimize it. If you open an old file that uses one of the affected typefaces, you may notice slight displacements in the positioning of certain letters. In most cases, you will not notice the change. Where it may be most noticeable is in text strings that have been fitted to a curve. If the appearance of any such text is unsuitable when opening the file in version 2.0, then simply straighten the text and re-fit it to the path.

- TIFF files employing LZW compression cannot be opened by CorelDRAW 2.0
- You may notice that some of the symbols available in the various symbol libraries may disagree with the listings shown in the *ClipArt & Symbols Catalog*. Symbols were being added and enhanced after the catalog went into print.

MOSAIC Utility

A couple of changes have also been made to the MOSAIC utility. They include:

- Amongst the other lines you will find in the [MOSAIC] section of the CORELDRW.INI file, a new one has been added that was not described in the Technical Reference. This concerns the defining of an "EXPAND" directory. The directory stated in this line will be used by the MOSAIC utility to *expand* (or "unarchive") library files.
- A **Next** button has been added in the *Get Info* dialog box. This permits you to view the *Keywords* and *Notes* of all the files in a selected group. Clicking on **Next** steps you through the *Keywords* and *Notes* sequentially.



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Guide to Operation

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CorelTRACE Guide to Operation - Version 2.00

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Dream Maker Software
Dynamic Graphics Inc.
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Multi-Ad Services, Inc.
New Vision Technologies
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Samples on disk were provided by the following companies:

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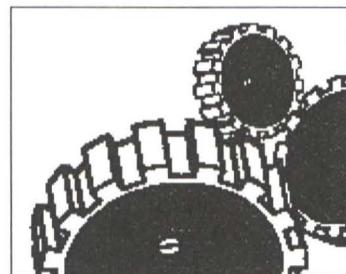
Introduction

If you're involved in desktop publishing, you probably have a digital scanner and a graphics program that allows you to edit or create your own bitmapped images. The major drawback with bitmaps, however, is their fixed resolution—a limitation that shows up as jaggedness when you enlarge the image or print it on a high resolution output device.

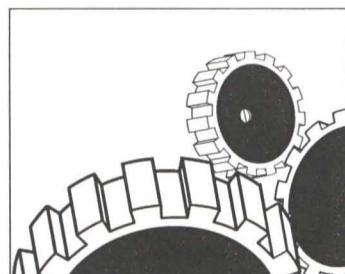
CorelTRACE solves this and other problems associated with bitmaps by turning them into vector-based images. This gives your artwork smooth lines that print at the highest resolution of your printer. It also means you can scale and even rotate the image without distorting it. And what's more, vector images take up less disk space and print faster than bitmaps.

You can use CorelTRACE to trace almost any type of artwork, from logos and letterforms to technical illustrations and architectural drawings. As well, CorelTRACE can faithfully reproduce colors and shades of gray contained in the bitmapped image. Once in vector form, the image can be used in a page layout program or brought into CorelDRAW for minor touch-ups or complete reworking.

Our objective with CorelTRACE is to provide you with a graphics production tool that saves time and is easy to use. If you have any comments or suggestions for improving the program or this manual, we'd like to hear from you.



*Scanned bitmap image
scaled 200%*



*Traced image enhanced
with CorelDRAW*

System Requirements

To use CorelTRACE you need the following:

- An 80286- or 80386-based IBM (or compatible) computer
- 640K of memory
- Microsoft Windows version 3.0
- Mouse (or other Windows-compatible pointing device)
- EGA, VGA or Hercules monochrome display adaptor card/monitor

Image File Formats

CorelTRACE accepts black and white, gray-scale and color images saved in either of the following formats:

- TIFF (.TIF) files
- PCX files

TIFF is the format that scanned images are most commonly saved in. The advantage of TIFF files is that they can be created at any resolution and can have any number of gray levels or colors. Their only disadvantage is that they can be very large in size. Though some scanners can compress monochrome (i.e., black and white) TIFF images by as much as 75%, CorelTRACE expands the image file back to its original size before tracing it. This is an important consideration since large or complex images can take up a lot of disk space during the tracing process. To be safe, you should have free disk space equal to ten times the file size of the image you're tracing.

PCX is the format used by bitmap editors such as PC Paintbrush. Like TIFF, PCX can handle monochrome, gray-scale and color images. Some scanners, however, are limited to 16 levels of gray when saving in PCX format.

Image Sources

Digital scanners, paint programs such as PC Paintbrush and Publisher's Paintbrush, bitmap clip art, and screen graphics captured with programs such as Hotshot and Hijaak are all acceptable sources of images. The only requirement is that the images be in TIFF or PCX format.

Hijaak also provides a conversion utility that lets you convert numerous other formats into TIFF or PCX. See the "Importing Graphics Files" section in the Technical Reference Guide for more information.

For best results, the images you plan to trace should consist of high resolution (300 dots per inch) black and white line art similar to the examples below. When considering a color image for tracing, keep in mind that those made up of areas of solid color trace much better than continuous tone images. A color photograph scanned from a magazine is an example of continuous tone image which may not trace very well.

Gray-scale images by definition are made up of solid shades of gray. These will trace with good results especially when the regions of gray are clearly defined, as in the example on the right. As a general rule, if you can discern a dotted pattern in the colors or grays, the image is probably not a good candidate for tracing.

If you're more interested in capturing the outline of an image than the colors or shades of gray, you can eliminate some of the colors/grays from the traced image with the *Color Reduction* feature. The traced image can then be used as a template for constructing a more detailed illustration in CorelDRAW.

Image Requirements

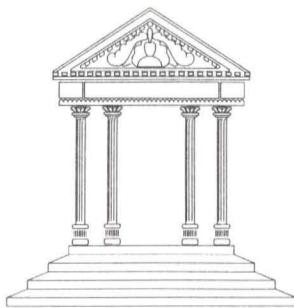
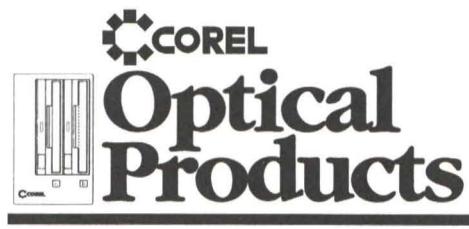


Image Scanning Tips



Image scanned at 75 dpi



Image scanned at 300 dpi

While CorelTRACE can compensate for some flaws, you'll get better results if you start with a high-quality bitmapped image. The following tips are included to help you use your scanner to create the best possible bitmapped images.

- Use artwork that is as clean and sharp as possible. If you must use a poor quality original, clean up the scanned image with your scanning software's editing features before tracing it.
- Select the line-art or color/gray-scaling setting to match the type of artwork being scanned.
- Scan black and white images at the highest resolution possible (300 dpi). This gives the program more information to work with and results in a better traced image. Color and gray-scale images should be scanned at 150 dpi or less. Scanning these images at higher resolutions produces extremely large files without adding very much to the quality of the traced image.
- If your original artwork is only a few square inches in size, use your scanner's scaling feature or a photocopier to increase it to about 4x5 inches. Note, scaling detailed images by more than 300 percent may cause a noticeable loss in quality. If possible, choose a higher resolution to compensate.
- The maximum image size is 3000x3000 pixels which at 300 dpi translates to 10x10 inches. Tracing images larger than this can yield unpredictable results.
- To reduce file size, crop any unnecessary white space around the image before tracing it. If you want to trace just a portion of the image, eliminate the unwanted parts with a bitmap editor, or use the *Trace Partial Area* feature in CorelTRACE.
- Ensure that your artwork is positioned at right angles to the edges of the scanning bed. If you are using a sheet-feed scanner you may find it helpful to mount small artwork on a sheet of 8.5x11 inch paper before scanning. Straight lines that appear broken or jagged as a result of poor alignment can be corrected using a bitmap editor such as PC Paintbrush or Publisher's Paintbrush before tracing.

- When scanning black and white artwork, adjust the scanner's contrast or intensity controls to get the sharpest image possible. If the original artwork contains fine lines (less than 1 point) that don't appear in the bitmap image, increase the contrast or intensity.
- When scanning color or gray-scale images, the contrast and intensity settings are especially important. In particular, if the image is too dark CorelTRACE will have difficulty distinguishing the shades of color or gray contained in the image.
- Some scanners can "see" only 16 levels or shades of gray while others can see as many as 256. CorelTRACE can also discern 256 levels of gray in a bitmapped image, but even with this capability scanning 16 levels is usually sufficient. If you do scan all 256 levels, the image will take up twice the disk space needed to save the same image scanned at 16 levels. Color images can be scanned for as many as 16 million colors but only 256 of these will be seen by CorelTRACE. If you're more interested in reproducing the shape of the image than you are its colors, set your scanner to scan for fewer colors (8 or 16).

Using CorelTRACE

CorelDRAW and Microsoft Windows must be installed and working before you can use CorelTRACE.

If you are not familiar with terms such as "menus" and "dialog boxes" or with using a mouse, you may want to read the opening chapters of your Windows manual before going any further.

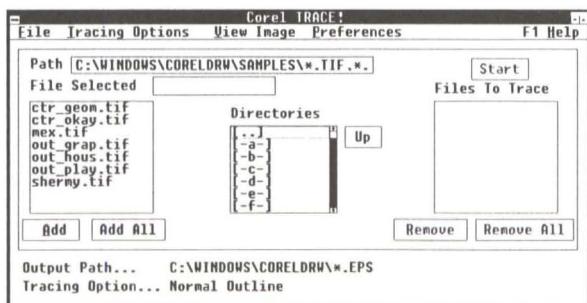
Starting CorelTRACE

To Start CorelTRACE

1. Start the Windows program.
2. Click on the COREL Group window.
3. Start CorelTRACE by double-clicking on the CorelTRACE icon.



The opening screen appears for a few seconds, and is then replaced by the program's Main dialog box.



Most of your interaction with CorelTRACE takes place from the Main dialog box. It has a menu bar along the top and various list boxes and text boxes showing directories and files. Along the bottom of the box are two important pieces of information. The first is the *Output Path* which tells you where the program stores traced images. The second is the *Tracing Option* line. The name here refers to a specific group of parameters that dictates how the program traces the bitmapped file. Both the output path and the tracing parameters can be changed via *Output Options* in the *File* menu and *Tracing Options* in the menu bar.

Main Dialog Box

Clicking on *Help* (or pressing *F1*) will give you on-screen access to the CorelTRACE Help file. It contains most of the information presented in this manual. Note that you can only access the Help file from the Main dialog box (i.e., the program's other dialog boxes cannot be open when you click on *Help*).

F1 Help Menu

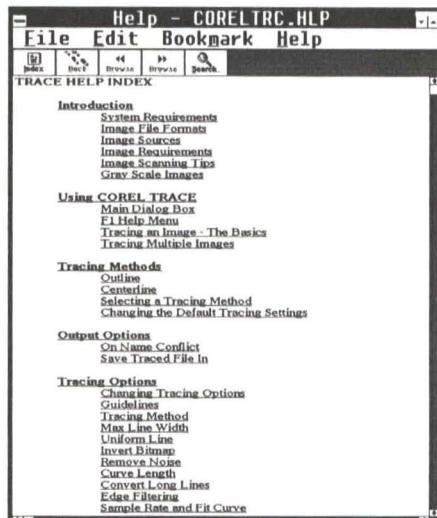
After opening the *Help* file, the first thing you see is the *Help Index*. You can jump to any topic in the index by double-clicking on it. Once a topic is chosen, information about that topic appears in the window.

You will notice that some words or phrases in the text are underlined. These items are referred to as *hypertext*, and if you click on them, further information on the item will be provided.

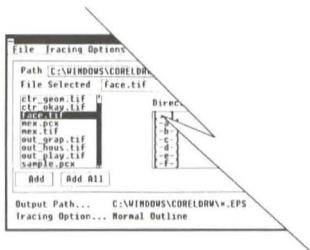
Clicking on the *Browse* options in the menu bar allows you to work through the Help file page-by-page. *Back* displays the last page you looked at regardless of its position in the Help file. Clicking on *Index* displays the Help file index.

The *Search* option lets you locate information on a particular topic by typing in a keyword or phrase or by selecting them from a list. For more information about this option, refer to your Windows User's Guide.

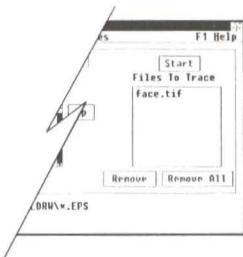
To leave the Help file, click on the *Exit* command in the *File* Menu.



Tracing an Image - The Basics



Select the files you want to trace from this list box.



Selected files appear in the Files to Trace box

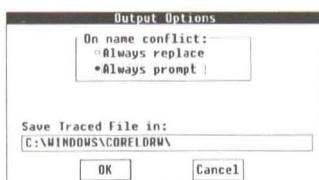
This section takes you through the basic steps involved in tracing an image. You can follow along using a sample bitmapped image located in the CorelDRAW SAMPLES subdirectory.

1. Select the image file OUT_PLAY.TIF by either clicking on the filename then the *Add* button, or by double-clicking on the filename.

The filename appears in the *Files to Trace* box. If you selected the wrong file, click on it, then select the *Remove* button to remove it from the list.

To list files in another directory, locate the directory in the *Directories* box then double-click on it. Use the *Up* button to go to the parent directory or the scroll bars to see other directories and drives that do not currently appear in the list.

2. Click on *File* in the menu bar then *Output Options*.



Output Options Dialog Box

A dialog box appears which allows you to specify where the program stores traced images and how it handles file name conflicts. For now, leave the default options unchanged and click on *OK*. More detailed information about *Output Options* is given in the "Saving Traced Images" section.

3. Choose *Tracing Options* from the menu bar.

A pull down menu appears with three choices: *Edit Option*, *Normal Outline* and *Normal Centerline*. The selection you make determines which method the program uses to trace the image. You can read more about the *Tracing Options* in the section "Customizing Tracing Options". For this example, click on *Normal Outline* (the check mark appears beside it indicating your selection).

4. Click on the *Start* button.

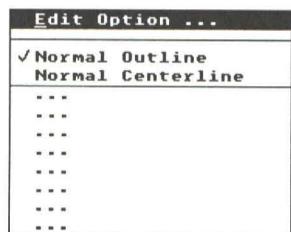
The Tracing window appears followed by the bitmap image. The image is then cleared from the window and the tracing process begins. If the *Trace Partial Area* option in the *Preferences Menu* is selected, tracing will begin when you click on the *OK* button.

The tracing process may take a few seconds or several minutes depending on the size and complexity of the image, the tracing method being used, and the amount of memory in your computer. An indicator at the bottom of the Tracing window shows the percentage of the tracing progress completed. You can turn this indicator on and off with the *Show Progress Rate* command in the *Preferences Menu*.

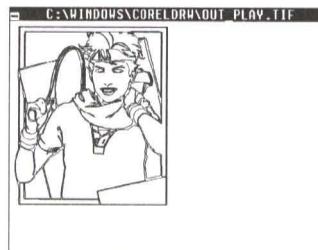
The traced image you see in CorelTRACE won't show colors and shades of gray contained in the bitmapped image. To see them, you must preview the image in CorelDRAW.

NOTE: To stop the image tracing process, either press the *ESC* key or double-click on the Control Bar icon in the upper left-hand corner of the tracing window.

5. To exit the program, click on *File* in the menu bar then *Exit!*



Tracing Options Menu



Traced image



Printed image

Tracing Multiple Images

CorelTRACE allows you to trace several images consecutively. You must, however, use the same *Output Options* and *Tracing Options* for all images. The same *Color Reduction* scheme will be used on all images as well. (See the Preferences Menu section for information about Color Reduction).

Prompts may appear before each image is traced warning that a file with the same name already exists in the destination directory. If you want CorelTRACE to trace all images without interruption, disable the prompt via the *Output Options* dialog box. This also applies to the *Trace Partial Area* option in the *Preferences* Menu; if it is selected, CorelTRACE will wait until you click on *OK* before tracing each image.

To Trace Multiple Files

1. Select the desired images by either clicking on the filename then the *Add* button, or by double-clicking on the filename.

OR

Click on *Add All* to select all images in the current directory.

The selected files appear in the *Files to Trace* box. Individual files can be removed from the list by clicking on the filename then selecting *Remove*. Selecting *Remove All* takes all files out of the list.

NOTE: You can have both TIFF and PCX files in the list at the same time.

2. Click on *Start* to begin tracing.

If you press ESC or double-click on the Control Bar icon in the tracing window while an image is being traced, the entire tracing process stops. To resume tracing of any remaining images, remove the image you aborted from the *Files to Trace* box, then click on *Start*.

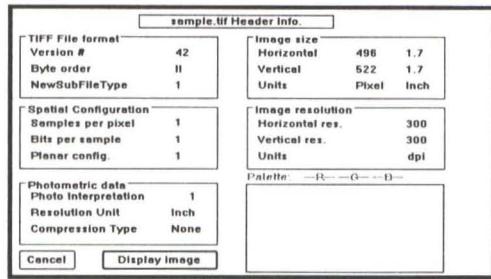
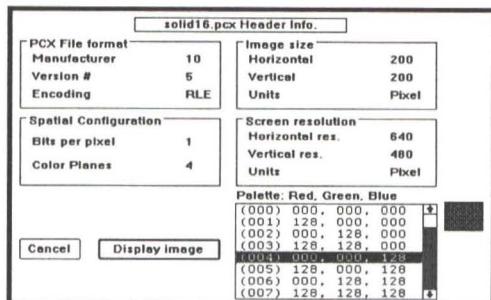
View File Information

This command displays a window with technical information about the currently selected file. Should you have difficulty tracing an image, this information may help our technical support staff determine the cause of your problem.

Depending on the type of file selected, one of two windows will appear when you click on *View File Information*.

If you want to view the image in the selected file, click on *Display Image*. To clear the image, double-click on the Control Bar icon in the upper left-hand corner of the display window.

Clicking on *Cancel* returns you to the Main dialog box.

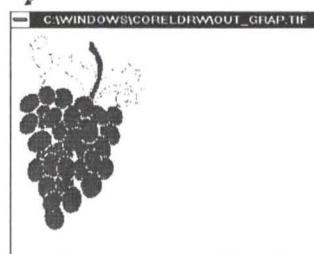


Display Image

This command lets you view the bitmapped image in the currently selected file.

To clear the image, double-click on the Control Bar icon in the upper left-hand corner of the display window.

Double-click here to clear the bitmapped image.



Choosing a Tracing Method

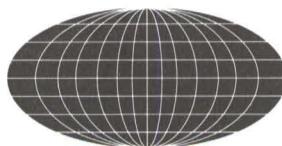
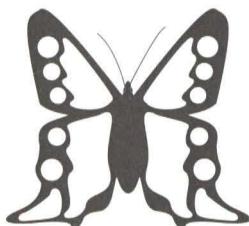
CorelTRACE uses two tracing methods: *Outline* and *Centerline*. Almost any image that contains fine lines, solid areas or combinations of both can be traced with satisfactory results using either of these methods. For special image requirements, you can change the predefined *Outline* and *Centerline* settings. These settings, referred to as *Normal Outline* and *Normal Centerline*, control such things as how tightly the tracing follows the original bitmapped image or what kind of lines are drawn.

Outline Method



The *Outline* method traces the edges of each element in the bitmapped image and fills the resulting outline in accordance with the type of image being traced. If you're tracing a black and white image for example, any areas which were black in the original image will also be black when printed or viewed in CorelDRAW or a page layout program. In the case of color and gray-scale images, CorelTRACE uses colors and shades of gray that are the closest match to the bitmapped image.

The *Outline* method is best for tracing images containing many thick, filled objects such as in the examples below. Gray-scale and color images and those consisting of white lines on a black background are also traced using the *Outline* method.

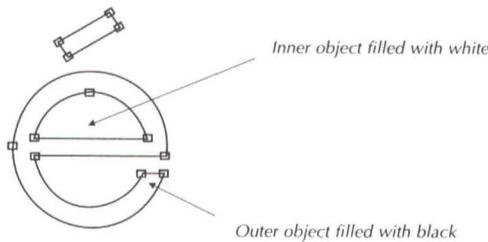


Outline Images

Since each element is treated as a filled area, lines appear as elongated ovals or rectangles when viewed in CorelDRAW. A shape such as a circle or the letter "e" which has an outer and an inner outline is created by filling the outer outline with black then filling the inner outline with white. The resulting objects are then layered with the white object placed on top of the black. This arrangement becomes apparent when viewing the object in CorelDRAW.



. . . as seen in the Preview window of CorelDRAW.



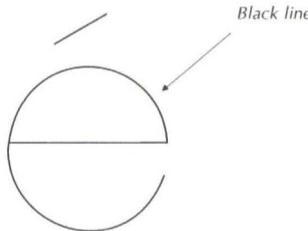
. . . as seen in the Editing window of CorelDRAW.

The *Centerline* method treats thin bitmapped lines as objects having a certain thickness but **no** fill. In other words the line itself and not its outline is traced. This distinction is revealed when you view a line traced using the *Centerline* method in CorelDRAW.

Centerline Method

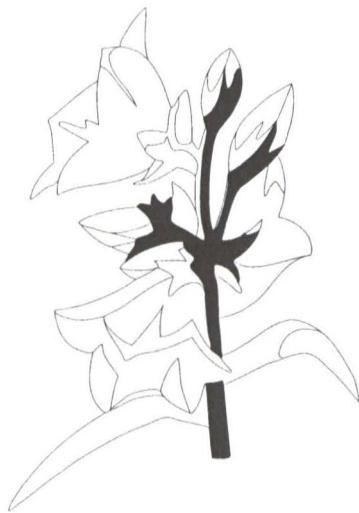


. . . as seen in the Preview window of CorelDRAW.



. . . as seen in the Editing window of CorelDRAW.

The *Centerline* method is best for images that contain many thin black lines such as architectural drawings or technical illustrations. This method also combines some of the techniques of *Outline* tracing when objects filled with black are detected.



Centerline Images

The images you trace with the *Centerline* method must consist of black lines on a white background. If, however, you want to invert the image so that the lines appear as white against a black background, then use the *Outline* method. See the *Invert Bitmap* option in the "Customizing Tracing Options" section for more information about reversing images.



Original image



Inverted image traced using the Outline method.

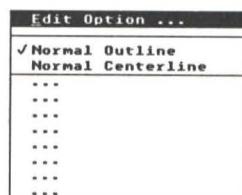
To Select a Tracing Method

1. Click on *Tracing Options* in the Main dialog box.

The *Tracing Options* menu appears with a check mark beside the currently selected tracing method.

2. Click on *Normal Outline* or *Normal Centerline*.

Selecting a Tracing Method



Tracing Options menu

The default settings for both tracing methods are appropriate for most of the images you are likely to trace. For special cases, you may want to change these settings. The changes you make to the settings remain in effect until you change them again or exit CorelTRACE. When you restart the program, the *Normal Outline* and *Normal Centerline* default settings are restored. If you expect to use the settings you've changed later, on similar images, you can save them under a new name and call them up whenever they are needed. The section, "Customizing Tracing Options" describes how the settings work and how to change them.

Changing the Default Tracing Settings

Saving Traced Images

Output Options

CorelTRACE allows you to choose which directory your traced images are saved in and how filename conflicts are handled. These options are accessed by opening the *File* menu in the Main dialog box then clicking on *Output Options*.



On Name Conflict

This option determines how the program treats any filename conflicts that may occur. Your choices are:

Always replace - the program will just write over the existing file without any warning prompts.

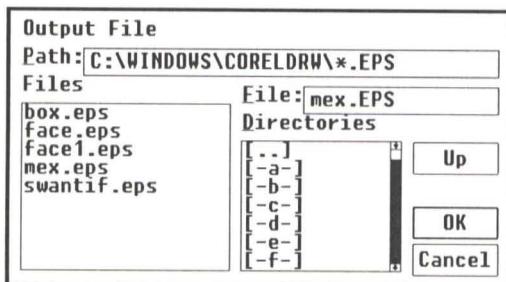
Always prompt - the program alerts you that a file with the same name already exists in the destination directory. This is the default option.

When a filename conflict occurs, the following dialog box appears:



If you want to overwrite the existing file click on Yes.

If you want to give the file a different name, click on the *No*. The following dialog box will appear, prompting you to enter a new name.



Click on *Cancel* if you want to return to the Main dialog box.

Save Traced File In

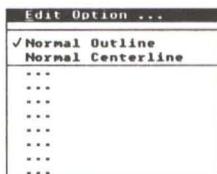
This option is used to specify a directory (called the *Output Path* or destination directory) where traced images will be saved. If you want to change the current *Output Path* click on the box and then type in the desired drive letter and subdirectory name(s).

Choose the options you require from the *Output Options* dialog box and click on *OK*.

Customizing Tracing Options

The *Outline* and *Centerline* tracing methods are designed for specific types of artwork. You may find you get better results when working with your particular artwork by changing the default tracing options. This section describes how the options work and how their settings are changed. A few guidelines are included to help you in making your selections.

Changing Tracing Options



To Change Tracing Options

1. Click on *Tracing Options* in the Main dialog box. The *Tracing Options* menu appears.

2. Click on one of the blank lines (...).

This opens the *Tracing Options* dialog box which lists all of the alterable tracing options.



3. Set the options as desired by clicking on the appropriate buttons.

4. Save your settings by assigning them a name in the *Option Name* box then click on *OK*.

This new name will appear in the list of options under the *Normal Outline* and *Normal Centerline* entries. To change any options after they have been saved, click on the name in the *Tracing Options* menu then click on *Edit*. To delete an entry from the list of options, replace the name in the *Option Name* box with three periods (...).

Without knowing the characteristics of your artwork or the results you wish to achieve, it is difficult to give specific recommendations on which setting to select for each of the tracing options. The four-step procedure below is designed to help you decide which settings will yield the best results for your particular artwork.

1. Determine the composition of the image you are tracing.
Is it made up of mostly lines, filled shapes, or a combination of both? Are the lines mostly straight or curved and are they thick or thin?
2. Based on the determinations you made in step 1, and the suggestions in the "Choosing a Tracing Method" section, select either the *Outline* or *Centerline* tracing method.
3. Decide how much detail you want to include in the traced image. Do you want as much as possible? Do you want an image with smooth edges and some detail, or do you want to reproduce just the general shape and features of the bitmapped image?
4. Determine how the image will be used. Will it be used as is? Will it be transferred to a page layout program or will it be brought into CorelDRAW for editing?

In general, the more detail in the bitmapped image you wish to reproduce, the larger the resulting traced file will be. File size also increases as the accuracy (i.e., tightness) with which the image is traced increases. Since the tracing options control both the amount of detail and the tracing accuracy, changing the options will have an effect on the size and complexity of the traced file. **If the file becomes too complex, you may have problems printing or importing it into CorelDRAW. Large files may also be more difficult to edit with CorelDRAW.**

How the Tracing Options Work

The tracing options controlling how an image is traced are described below.

Tracing Method

Outline - tells the program to use the Outline tracing method only. *Centerline* - tells the program to use the Centerline tracing method to trace lines and the Outline method to trace filled objects.

Max Line Width

The *Max Line Width* option is available when you select *Centerline* as the tracing method. It allows you to specify how many layers of pixels CorelTRACE removes from the lines in your image. A higher setting results in a smoother line; a lower setting in a rougher line. If you want the lines in the traced image to match as closely as possible the weight and detail of those in the original, use the lowest setting. Use the *Outline* tracing method if the majority of lines are wider than six points or 25 pixels at 300 dpi.

Line width is measured in dots or pixels in the range 2 to 99. The default setting is three. The setting you select depends on the resolution of the image. At 300 dpi for example, the setting should at least equal the weight of the heaviest line in the image. The charts below give some recommended settings for various line weights at various resolutions. Experiment with different settings to get the results you desire.

Line Thickness	Bitmap Resolution		
	75 dpi	150 dpi	300 dpi
0.5 pts	*	1	2
1 pts	*	2	4
2 pts	2	4	8
3 pts	3	6	12
4 pts	4	8	16
5 pts	5	10	20
6 pts	6	12	24

Uniform Line Option - Points to Pixels Conversion

* Use higher resolution

Line Thickness	Max Line Width Setting	
	0.5 pts	*
1 pts	*	
2 pts	2	
3 pts	2	
4 pts	2	
5 pts	3	
6 pts	4	

Bitmap Resolution: 75 dpi

Line Thickness	Max Line Width Setting	
	0.5 pts	*
1 pts	2	
2 pts	2	
3 pts	3	
4 pts	4	
5 pts	5	
6 pts	6	

Bitmap Resolution: 150 dpi

Line Thickness	Max Line Width Setting	
	0.5 pts	2
1 pts	2	
2 pts	2-3	
3 pts	3-4	
4 pts	4-5	
5 pts	5-6	
6 pts	6-7	

Bitmap Resolution: 300 dpi

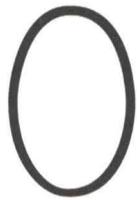
Uniform Line

The *Uniform Line* option is available when you select *Centerline* as the tracing method. It allows you to assign a specific weight from 1 to 99 dots or pixels to all lines in the image. The default is 1 pixel. When you select this option, set *Max Line Width* to match the heaviest line in the image. Remember, since line width is measured in pixels, the *Max Line Width* setting you select will depend on the resolution of the image. Refer to the chart on the previous page to convert points to pixels at various resolutions. If this option is **not** selected, the weights of each segment along the length of the line are added and an average of those weights is assigned to the entire line.

Though recommended for most types of images, you may **not** want to use the *Uniform Line* option when tracing images with varying line weights or calligraphic letters. If you do choose the option in these cases, you can use CorelDRAW to change the weights of the lines in the traced image to match those in the original.



Original bitmapped letter "O"



Traced letter "O" with Line Uniformity option deselected.

Invert Bitmap

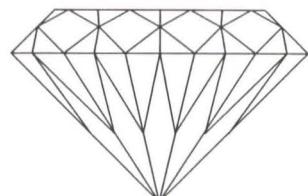
This option applies to black and white images or color and gray-scale images reduced to black and white with the *Color Reduction* feature. Select it if you want CorelTRACE to reverse the black and white areas in the bitmap image before tracing it.



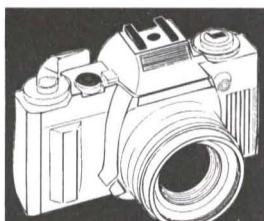
Original image



Original image



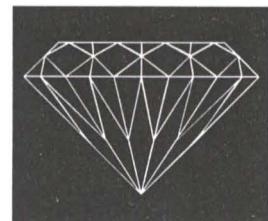
Original image



Inverted image



Inverted image



Inverted image

Remove Noise

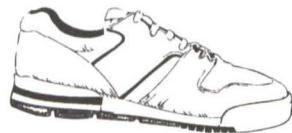
CorelTRACE automatically removes objects in the bitmapped image that are smaller than a specified number of pixels clustered together. By adjusting the *Remove Noise* setting you can compensate for poor quality originals or remove extra pixels added during the scanning process. You can select a setting of 2 to 999 pixels; the default is 8. The following examples show how varying the *Remove Noise* setting affects the amount of detail in the image.



Original Artwork



Traced image with Remove Noise set to 8 pixels.

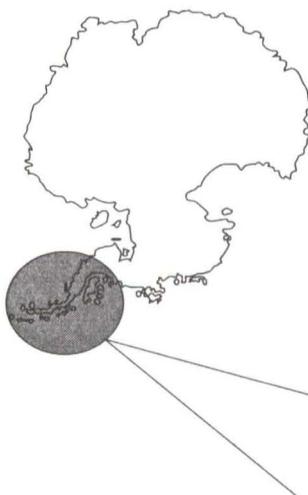


Traced image with Remove Noise set to 100 pixels.

Curve Length

This option limits the length of individual curves in the traced image. For most types of images the default setting *Very Long* is usually adequate. If, however, you want to reproduce as much detail in the bitmapped image as possible, you should select *Short* or *Very Short*. You'll also need to adjust the *Fit Curve* and *Sample Rate* options for the *Curve Length* setting to have any effect. In fact, changing *Curve Length* alone, will have no effect on the appearance of the traced image.

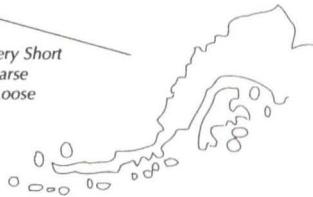
You should also be aware that the *Curve Length* setting has an impact on the size of the traced image file. Selecting a shorter *Curve Length* setting produces more nodes which in turn results in a larger traced image file. CorelTRACE creates these nodes during the tracing process and joins them together to reproduce the bitmap curve.



Curve Length: Very Short
Sample Rate: Fine
Fit Curve: Very Tight

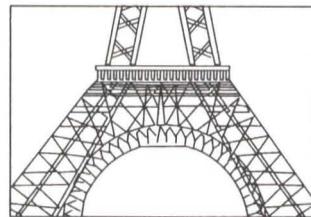


Curve Length: Very Short
Sample Rate: Coarse
Fit Curve: Very Loose



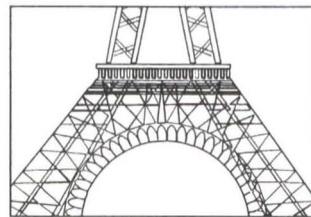
Convert Long Lines

This option lets you control whether CorelTRACE converts long lines into straight or curved lines. For images containing both types of lines, the default setting *Medium* is usually adequate. If you have an image containing only straight lines, such as an architectural drawing, select *Lines*. Select *Curves* if the image contains only curves. Compare the effect of the *Curves* and *Lines* settings on the arch in the example.



Convert Long Lines: Lines

The setting you choose also determines what type of nodes CorelTRACE uses when it creates a line. Nodes are the points that appear along the line when it is viewed in CorelDRAW. A curved line has nodes that control the shape of the curvature. The nodes along a straight line prevent the line from curving. The following example illustrates the difference between a curve node and a straight line node.



Convert Long Lines: Curves



Curve nodes



Line nodes

Edge Filtering

The *Edge Filtering* option determines the smoothness of outlined objects in the traced image. If those outlines are very jagged, set this option to *Mild* or *Smooth*. Use the default setting *None*, if you want to capture as much detail in the original image as possible. The effect of this option is more noticeable on images scanned at 150 dpi (example below) or less.



Edge Filtering: None



Edge Filtering: Smooth

Sample Rate and Fit Curve

These options let you control how closely the traced image matches the bitmapped image. If you want to get the closest match possible, set *Sample Rate* to *Fine* and *Fit Curve* to *Very Tight*. You should keep in mind that with these settings, CorelTRACE creates more nodes which results in a larger traced image file. Setting these options to *Coarse* and *Very Loose* produces a poorer match but tends to reduce the rough edges or flaws in the bitmapped image. These settings also create fewer nodes.

For most images, there is no need to change the *Medium* default settings for either option. If, however, your image was scanned at 150 dpi or less, the *Sample Rate* and *Fit Curve* tend to have a more noticeable effect. Compare the following 150 and 300 dpi images traced with these options set to both extremes.

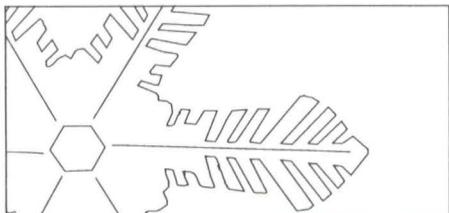


Image Resolution: 150 dpi
Sample Rate: Fine
Fit Curve: Very Tight

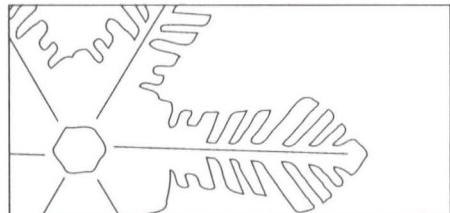
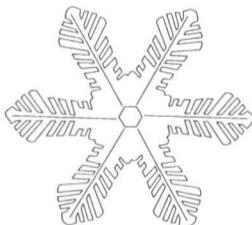


Image Resolution: 150 dpi
Sample Rate: Coarse
Fit Curve: Very Loose



Original Image

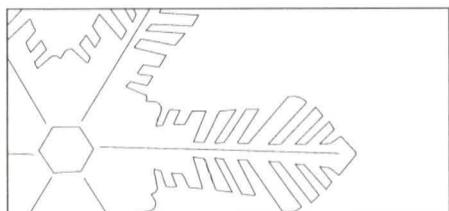


Image Resolution: 300 dpi
Sample Rate: Fine
Fit Curve: Very Tight

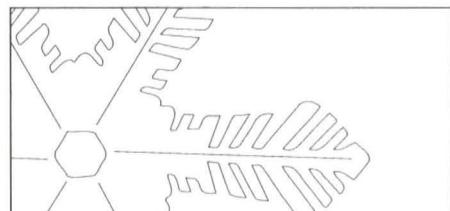


Image Resolution: 300 dpi
Sample Rate: Coarse
Fit Curve: Very Loose

Preferences Menu

The commands in the Preference Menu allow you to set options which affect the way CorelTRACE operates. You can change these options at any time.

This command allows you to trace a specific portion of the bitmapped image. After you've chosen the image and clicked on *Start*, a selection box with eight handles will appear around the entire bitmapped image. To select the area you wish to trace, move the cursor over one of the eight handles. When the cursor changes to a \leftrightarrow , click and drag. Repeat this action using other handles until you've enclosed the area you want to trace. Click on *OK* to begin the tracing process.

Trace Partial Area



To cancel the *Trace Partial Area* command, double-click on the Control Bar icon in the top left corner of the Tracing window.

If you are tracing multiple images, CorelTRACE displays each image with the selection box and then waits until you click on *OK* before beginning the tracing process.

**Show Progress
Rate &
Show Tracing Info**

Selecting the *Show Progress Rate* command displays an indicator showing what percentage of the tracing process has been completed.

The *Show Tracing Info.* command displays the following information about the traced image:

- Image size in pixels
- Number of nodes and objects in the image
- Time required to trace

Knowing how many nodes and objects there are in the traced image is particularly useful since CorelDRAW has limits on the number of these a file can contain. Three thousand is the theoretical limit on the number of objects, while the number of nodes is limited to 1000 to 2000 per object, depending on your printer. If necessary, you can trace a smaller portion of the image or adjust the appropriate tracing parameters to reduce the node and/or object count.

**View Dithered
Colors**

This command gives you the option of displaying colors and shades of gray on your screen as dithered or pure.

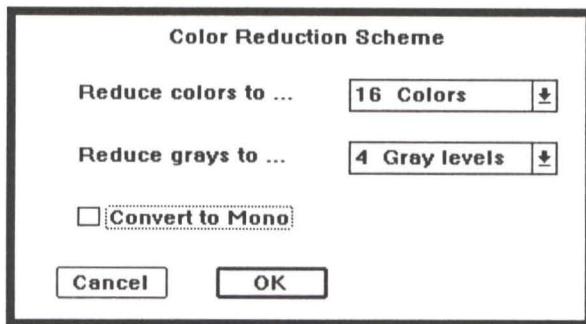
Regardless of which option you choose, the quality of the traced image remains unaffected. To access the command, you must have a monitor/graphics adaptor that can display 256 (or more) colors or shades of gray simultaneously, and a Windows 3.0 screen driver that takes advantage of this capability.

For a detailed discussion on the subject of dithered vs pure color, see "Preferences..." in the "Special Menu" section of your CorelDRAW User's Guide.

Color Reduction...

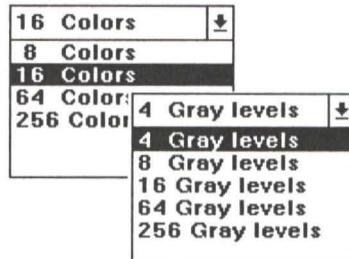
This command gives you control over the number of colors and levels of gray CorelTRACE uses to fill the traced image. You can also have the program convert colors and gray levels in the bitmapped image into appropriate values of black and white.

When you select the *Color Reduction...* command, the following dialog box appears:



The list boxes on the right show the currently selected color and gray level reduction options. Each box opens into a list of available choices when you click on the arrow on the right side of the box. To select the option you wish to use, simply click on it.

To convert color and gray-scale images to black and white, click on *Convert to Mono*.

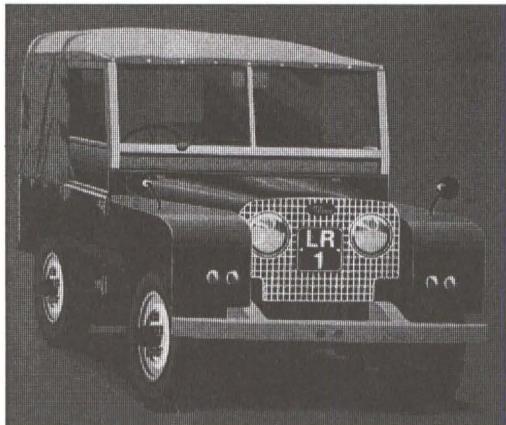


For complex images with many colors or gray levels, you can frequently trace the image with better results by selecting a *Color Reduction* option in the range 4 to 16. In most cases, this will also reduce the number of nodes and objects in the traced image. If you're more interested in capturing the shape of the bitmapped image than you are with its colors or gray levels, use the *Convert to Mono* option. Examples on the next page show a gray-scale image traced using various *Color Reduction* options.

The colors CorelTRACE uses to fill the traced image are selected from a palette of colors which may not match those in the bitmapped image exactly. You determine the colors used when you select a *Color Reduction* option. If you select

the *8 Colors* option for example, CorelTRACE will use red, green, blue, yellow, cyan, magenta, plus black and white to fill the traced image. With the *16 Color* option selected, a darker shade of each of these colors along with two levels of gray plus black and white are used.

Note, when tracing multiple images, the color reduction options you select apply to all images.



Original image scanned as 4-level gray-scale at 75dpi.



Image traced with Gray Level reduction set to 16.

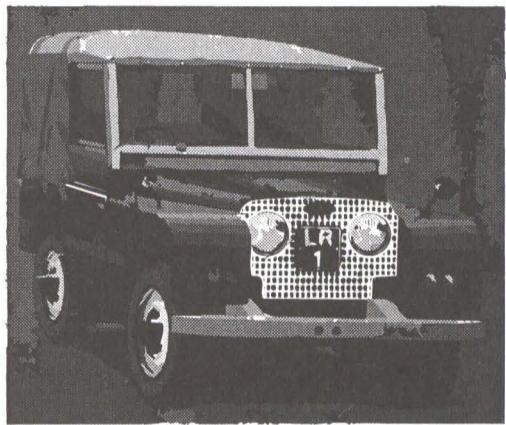


Image traced with Gray Level reduction set to 8.

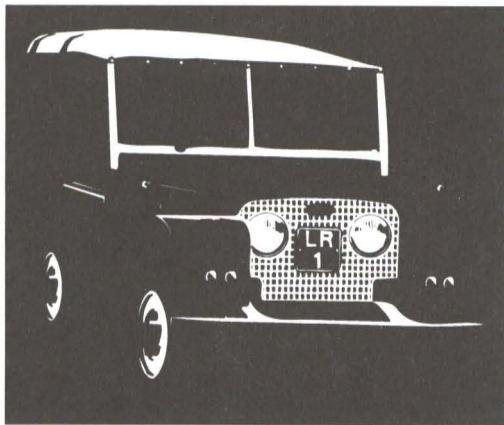


Image converted to black and white.

Importing CorelTRACE Images

To import images files into CorelDRAW, choose *File*, then *Import* and click on CorelTRACE as the import type. Once the image has been imported, you may work with it in the same way as you would with any image originally created with CorelDRAW. **To work on individual elements the image must first be ungrouped.** All of the powerful features of CorelDRAW can then be used to alter the image, including changing the shape, fill, outline, position and size of any element. Refer to your CorelDRAW user's manual for complete information.

CorelDRAW

Though it is designed to be used with CorelDRAW, most images converted by CorelTRACE can be imported directly into the following IBM PC programs:

- Aldus Pagemaker 3.0
- Xerox Ventura 3.0
- WordPerfect 5.1
- Microsoft Word 5.0
- Ami Pro
- Arts and Letters (via decipher program)

You may find that other programs will accept CorelTRACE files provided they are brought into CorelDRAW first, then exported in a format that the particular program supports. See your program's documentation for information about the file formats it can import.

NOTE: To print CorelTRACE images directly from any program other than CorelDRAW, you must have a PostScript printer. Bringing the image into CorelDRAW allows you to print the image on a non-PostScript printer such as the HP LaserJet.

Other Programs

Image Headers

EPS files created by CorelTRACE do not include an image header. The image header is a bitmap representation of the traced image which allows you to correctly size and position it in the above programs. Without the header, the image still prints correctly, but instead of the bitmap, your screen displays an empty box. You can add a header to the image file by importing it into CorelDRAW. In CorelDRAW you export the file as a PostScript file *with* image header included. You can also specify the size of the header you want to include with the file. This determines the resolution of the bitmap only, and has no impact on the quality of the printed image. We strongly recommend using a setting of 128x128 because it adds only about 2K to the overall size of your file. Size is an important factor because some programs limit the size of the image header to 64K. For more information about image headers, refer to the "Tips and Hints" section in the Technical Reference.

Tips and Hints

This section includes some suggestions for improving the quality of your traced images. You'll also find some tips on reducing conversion times, calculating disk space requirements and dealing with problems that may arise when trying to import traced images into CorelDRAW.

1. If you want to trace an image stored on a floppy disk, copy the image file to your hard disk before tracing it. Tracing from a floppy disk is usually much slower than from a hard disk.
2. Avoid running other Windows applications while using CorelTRACE. These applications compete with CorelTRACE for memory and may add significantly to the tracing time. With large files, your computer may even lock up if there is not enough memory.

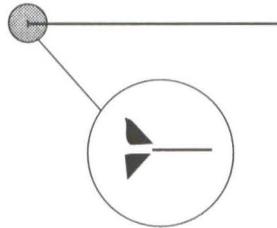
Reducing Conversion Times

Tracing a large or complex image can easily consume several megabytes of disk space. This may exceed the amount of space available in your TEMP directory (two megabytes is the recommended minimum). If there isn't enough room, the message, "Temp directory full, check system's config." will appear on your screen. For a rough estimate of the amount of disk space in kilobytes that CorelTRACE will need to convert an image, multiply the bitmap file size by 10.

Calculating Disk Space Requirements

Improving Image Quality

1. If the ends of the lines in the traced image look like those in the example below, reduce the *Max Line Width* setting then trace the image again. Continue to reduce the setting until you're satisfied with the results.

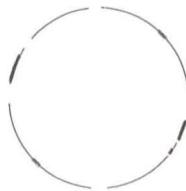


Four point line traced with Max Line Width set to 9.

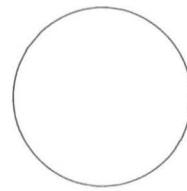
Four point line traced with Max Line Width set to 4.

An alternate solution that works well on images that don't contain a lot of detail is to increase the *Remove Noise* setting in increments of 10 until the extra points disappear.

2. If curves in the traced image look like those in the example below, increase the *Max Line Width* setting then trace the image again. Continue to increase the setting until you're satisfied with the results.



Four point line traced with Max Line Width set to 4.



Four point line traced with Max Line Width set to 9.

3. If you want all lines in the image traced as lines rather than filled objects, set the *Max Line Width* option to match the weight (in pixels) of the heaviest line. Also, increase the *Remove Noise* setting in increments of 10 to remove extra points that appear at the ends of lines.

4. If your image contains intersecting lines of varying thickness, select the *Uniform Line* width option before tracing the image. You can then use CorelDRAW to adjust the thickness of the lines as required.
5. If fine lines don't appear in the bitmapped image, scan the image again at a higher resolution. As a rule of thumb set your scanner's resolution to at least **twice** as fine as the finest line detail in the image. For example, if the finest line in your original artwork is 1/150" (about 1/2 a point), then set your scanner to 1/300", or in other words 300 dpi. Conversely, if you set your scanner to only 100 dpi (resolution = 1/100"), then CorelTRACE will pick up any line thicknesses over 1/50" or about 1 1/2 points.
6. If fine lines in the traced image appear broken or don't show up at all, set *Edge Filtering* to None then retrace the image.
7. The *Centerline* tracing method tends to distort the ends of sharply tapered objects (see the wing tips in the example below). Often, the quickest way to correct this problem is to edit the image with CorelDRAW. You can also try retracing the image using the *Outline* method. Retracing, however, can create gaps in curved lines less than one point thick. See the following paragraph for further information.



The effect of using the Centerline method to trace images with sharp, tapered objects.



The broken line indicates where the curve outlines overlap or cross, resulting in gaps.

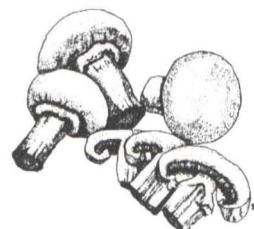
8. Gaps can occur in curves less than one point thick when an image is traced using the *Outline* method. These gaps show up when the image is printed or previewed in CorelDRAW. If you magnify the area where one of these gaps appear, you'll see that the outlines of the curve cross or overlap as shown in the example. A gap results because no area exists in which to fill the outline of the curve. You can eliminate the gaps by pulling the lines apart with the tool in CorelDRAW or by selecting black as an outline color. (There is no need to assign an outline thickness unless you want to increase the thickness of the curve.)
9. When tracing multiple bitmapped images at once, make sure that they were all scanned at the same resolution. The tracing settings you select may have widely varying results if you mix images scanned at different resolutions.
10. If your traced image is reversed (i.e., black and white areas flipped), make sure the *Invert Bitmap* option in the *Tracing Options* dialog box is not selected then retrace the image.
11. If the image you want to trace contains text in a standard typeface, consider tracing the image *without* the text. After the image is traced, reinsert the text with CorelDRAW or your page layout program. This will give you better looking text that is also much easier to edit. If the text is part of a logo, or is stylized, this approach might not be practical. In these cases, include the text with your trace and bring the resulting image into CorelDRAW. You can then edit the shape of the text or recreate it with CorelDRAW's own fonts using the original text as a template. When you finish, delete the original traced text. For best results, work with text that is at least 36 points and a scanner resolution of 300 dpi.

12. Images traced from a PCX file come into CorelDRAW with the same aspect the ratio as the original bitmapped image. They are, however, resized to fit an 8.5x11 inch page. Use CorelDRAW's stretching and scaling features to restore the proper dimensions.
13. To improve the quality of inverted images consisting of white lines on a black background that are less than one point thick, follow these steps:
- Trace the image using the *Centerline* method and a *Uniform Line* width setting of at least 4 pixels (dots).
 - Bring the resulting image into CorelDRAW and then export it as a 300 dpi TIFF file.
 - Go back into CorelTRACE, select the *Invert Bitmap* option then trace the TIFF image created in step 2 using the *Outline* method.

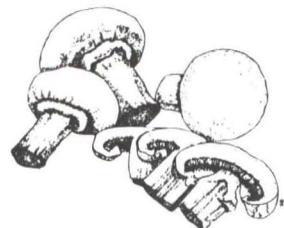
Images created by CorelTRACE can become quite complex. As a result, you may have problems importing such images into CorelDRAW. The types of images that are likely to cause trouble contain a great deal of detail. In the example shown here, CorelTRACE reproduced the textures in the bitmapped image by creating many short line segments. When the number of segments exceeds a certain limit, loading the image into CorelDRAW can cause the program to lock up. With less detailed images, it can take several minutes for the image to load. And once loaded, you may find that the image won't print. To get around these problems try one or more of the following suggestions.

- Reduce the size of the file by tracing a smaller portion of the bitmapped image.
- Scan the image at a lower resolution.
- Eliminate some of the detail by Increasing the *Remove Noise* and *Edge Filtering* settings and by decreasing the *Fit Curve* and *Sample Rate* settings.
- In CorelDRAW simplify the image by breaking apart long lines, deleting groups of nodes or entire objects.

Importing Complex Images



Original Image



Traced image with tracing options set to reduce level of detail.

Samples

Several sample image files have been included on the CorelDRAW samples disk. Try tracing these images using different tracing option settings to see what effect they have on the resulting image. The three letter prefix indicates which tracing method, *Outline* or *Centerline*, should be used to trace the image.

The illustrations on the next few pages are examples of bitmapped images that were converted with CorelTRACE and then in some cases, enhanced with CorelDRAW. These images are not included on the sample disk.



OUT_HOUS.TIF



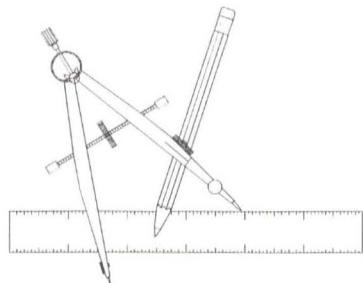
OUT_PLAY.TIF



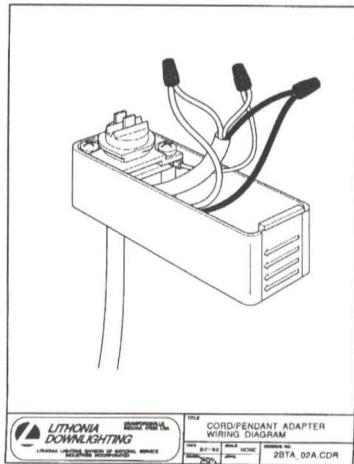
CTR_OKAY



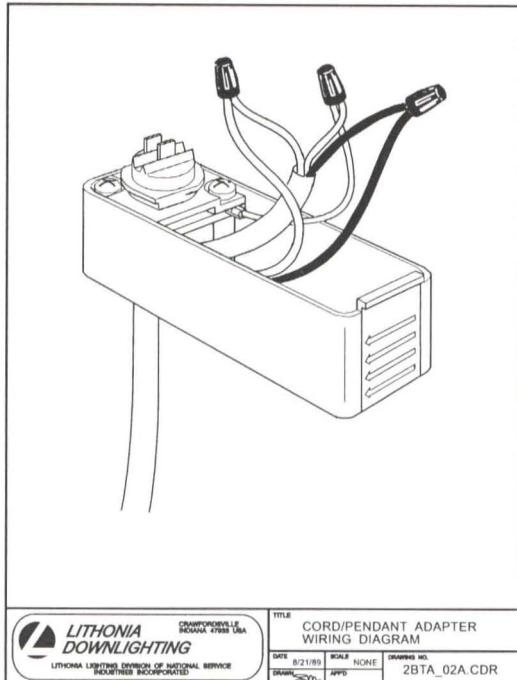
OUT_GRAP.TIF



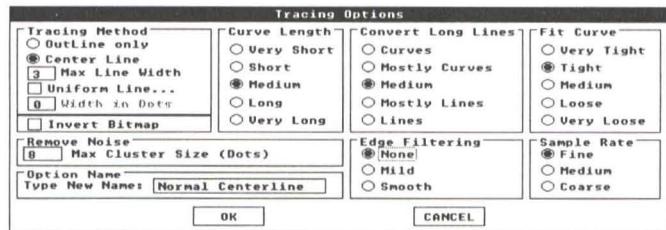
CTR_GEOM.TIF



Bitmapped Image: 300 dpi
TIFF file



Traced Image
Method: Centerline
Settings:



NOTE: The text was removed prior to tracing and then added to the traced image with CorelDRAW.

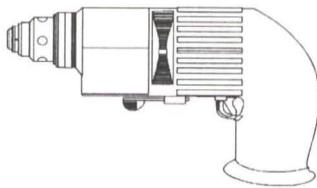


Bitmapped Image: 300 dpi
TIFF file

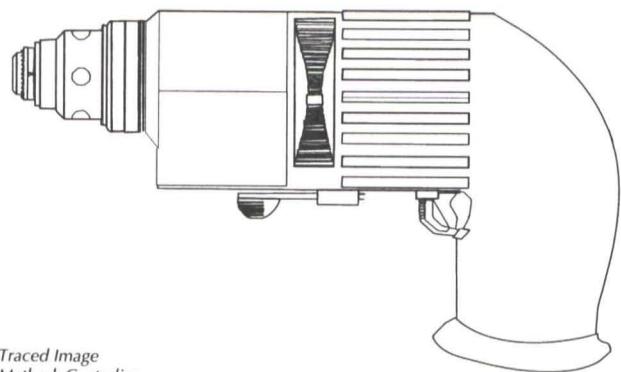


Traced Image
Method: Outline
Settings:

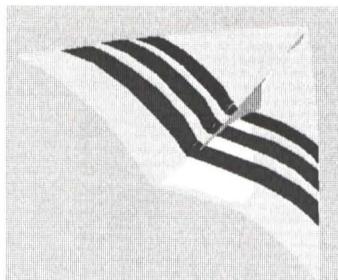
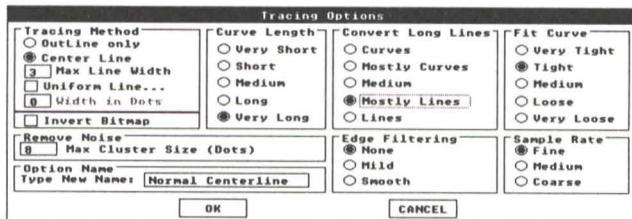
Tracing Options			
Tracing Method <input checked="" type="radio"/> Outline only <input type="radio"/> Center Line <input checked="" type="checkbox"/> Max Line Width <input type="checkbox"/> Uniform Line... <input checked="" type="checkbox"/> Width in Dots <input type="checkbox"/> Invert Bitmap	Curve Length <input type="radio"/> Very Short <input type="radio"/> Short <input checked="" type="radio"/> Medium <input type="radio"/> Long <input type="radio"/> Very Long	Convert Long Lines <input type="radio"/> Curves <input type="radio"/> Mostly Curves <input checked="" type="radio"/> Medium <input type="radio"/> Mostly Lines <input type="radio"/> Lines	Fit Curve <input type="radio"/> Very Tight <input type="radio"/> Tight <input checked="" type="radio"/> Medium <input type="radio"/> Loose <input type="radio"/> Very Loose
Remove Noise <input checked="" type="checkbox"/> Max Cluster Size (Dots)	Edge Filtering <input type="radio"/> None <input checked="" type="radio"/> Mild <input type="radio"/> Smooth	Sample Rate <input type="radio"/> Fine <input checked="" type="radio"/> Medium <input type="radio"/> Coarse	
Option Name Type New Name: <input type="text" value="Normal Outline"/>		OK	CANCEL



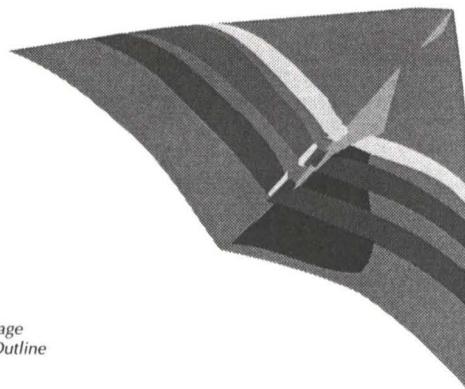
Bitmapped Image: 300 dpi
TIFF file



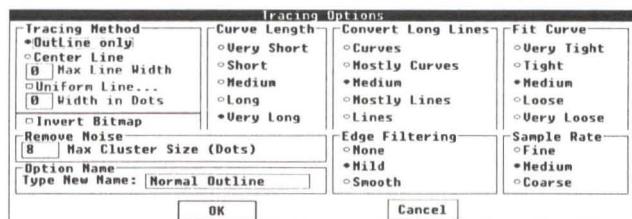
Traced Image
Method: Centerline
Settings:



Color Bitmapped Image scanned at 150 dpi .



Traced Image
Method: Outline
Settings:





Bitmapped Image: 300 dpi
TIFF file



Traced Image
Method: Outline
Settings:

Tracing Options			
<input type="checkbox"/> Tracing Method <input checked="" type="radio"/> Outline only <input type="radio"/> Center Line <input checked="" type="checkbox"/> Max Line Width <input type="checkbox"/> Uniform Lines... <input checked="" type="checkbox"/> Width in Dots <input type="checkbox"/> Invert Bitmap	<input type="radio"/> Very Short <input checked="" type="radio"/> Short <input type="radio"/> Medium <input type="radio"/> Long <input type="radio"/> Very Long	<input type="checkbox"/> Convert Long Lines <input type="radio"/> Curves <input type="radio"/> Mostly Curves <input checked="" type="radio"/> Medium <input type="radio"/> Mostly Lines <input type="radio"/> Lines	<input type="radio"/> Fit Curve <input type="radio"/> Very Tight <input checked="" type="radio"/> Tight <input type="radio"/> Medium <input type="radio"/> Loose <input type="radio"/> Very Loose
<input type="checkbox"/> Remove Noise <input checked="" type="checkbox"/> Max Cluster Size (Dots)		<input type="radio"/> Edge Filtering <input type="radio"/> None <input checked="" type="radio"/> Mild <input type="radio"/> Smooth	<input type="radio"/> Sample Rate <input checked="" type="radio"/> Fine <input type="radio"/> Medium <input type="radio"/> Coarse
Option Name Type New Name: Normal Outline		OK CANCEL	

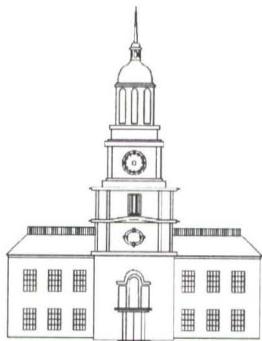


Bitmapped Image: 300 dpi
TIFF file

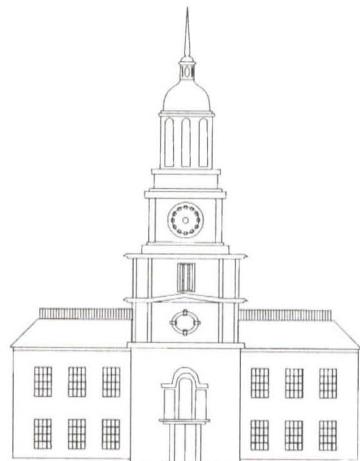


Traced Image
Method: Outline
Settings:

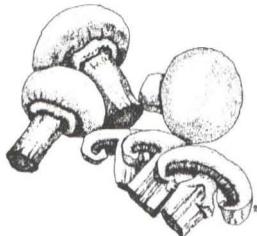
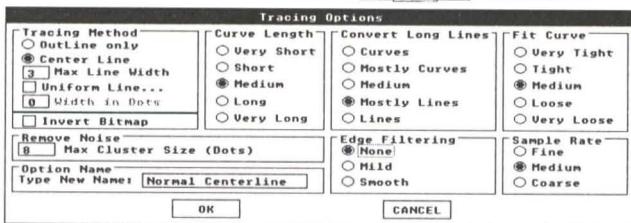
Tracing Options			
<input type="checkbox"/> Tracing Method <input checked="" type="radio"/> Outline only <input type="radio"/> Center Line <input checked="" type="checkbox"/> Max Line Width <input type="checkbox"/> Uniform Lines... <input checked="" type="checkbox"/> Width in Dots <input type="checkbox"/> Invert Bitmap	<input type="radio"/> Very Short <input checked="" type="radio"/> Short <input type="radio"/> Medium <input type="radio"/> Long <input type="radio"/> Very Long	<input type="checkbox"/> Convert Long Lines <input type="radio"/> Curves <input type="radio"/> Mostly Curves <input checked="" type="radio"/> Medium <input type="radio"/> Mostly Lines <input type="radio"/> Lines	<input type="radio"/> Fit Curve <input type="radio"/> Very Tight <input type="radio"/> Tight <input checked="" type="radio"/> Medium <input type="radio"/> Loose <input type="radio"/> Very Loose
<input type="checkbox"/> Remove Noise <input checked="" type="checkbox"/> Max Cluster Size (Dots)		<input type="radio"/> Edge Filtering <input type="radio"/> None <input checked="" type="radio"/> Mild <input type="radio"/> Smooth	<input type="radio"/> Sample Rate <input type="radio"/> Fine <input checked="" type="radio"/> Medium <input type="radio"/> Coarse
Option Name Type New Name: Normal Outline		OK CANCEL	



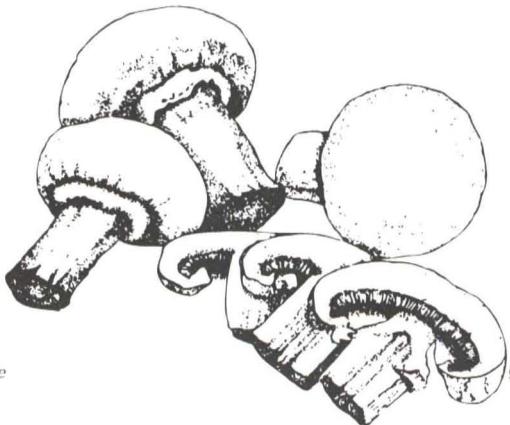
Bitmapped Image: 300 dpi
PCX file



Traced Image
Method: Centerline
Settings:



Bitmapped Image: 300 dpi
PCX file



Traced Image
Method: Outline
Settings:



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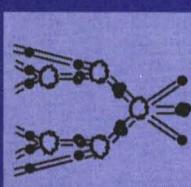
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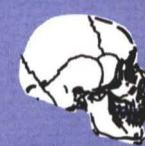
Add Flame!



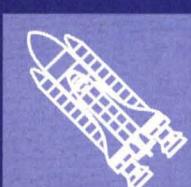
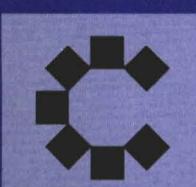
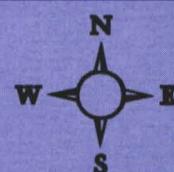
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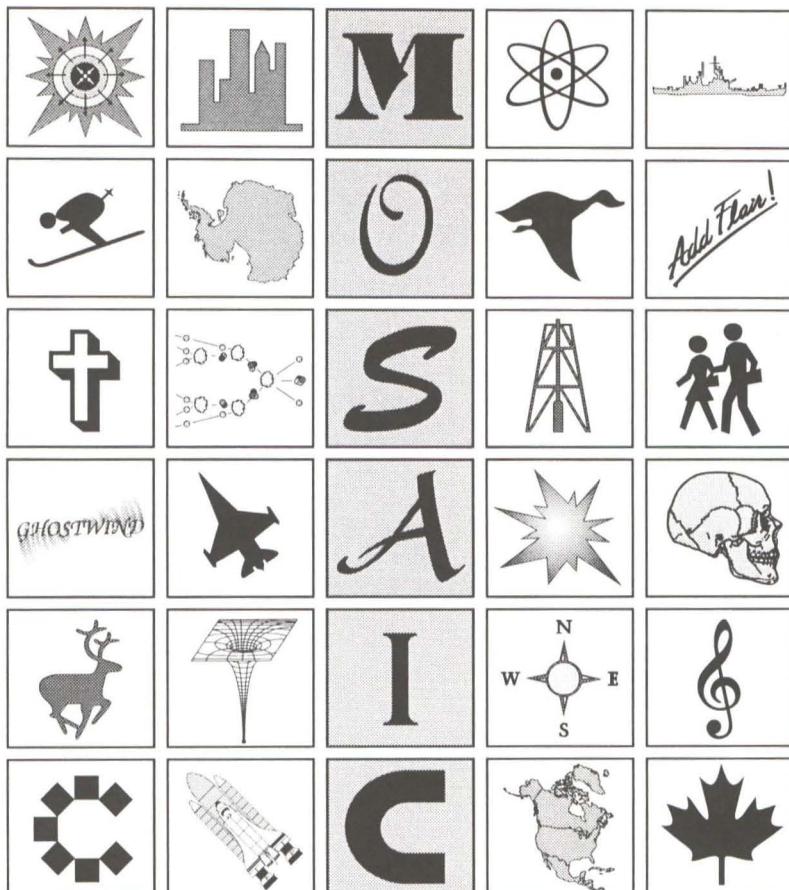


C



V I S U A L F I L E M A N A G E R

COREL *DRAW!*



V I S U A L
F I L E
M A N A G E R

Q042-E200

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COREL MOSAIC, Version 1.10d

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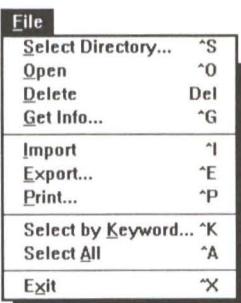
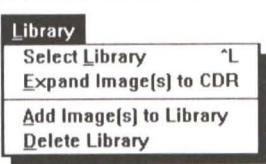
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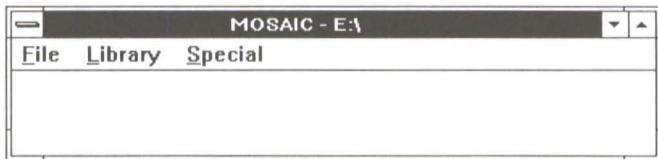
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Introduction

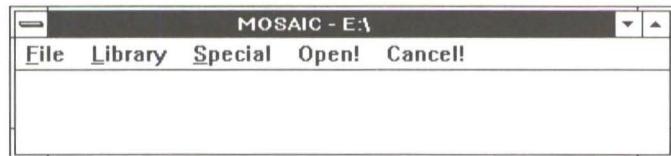
MOSAIC is a new utility supplied for the first time with the 2.0 release of CorelDRAW. It is a multi-purpose program designed to make the manipulation of your CorelDRAW files much easier. MOSAIC can be opened in one of two ways, either as a separate program under Windows, or you can configure CorelDRAW to use MOSAIC directly. This is done via DRAW's *Preferences* command under its SPECIAL pulldown menu item (see the User's manual for more information). MOSAIC performs differently, depending on which of these two ways it is called.

To open MOSAIC as a separate program, simply double-click on the MOSAIC icon in the Corel Applications Group in the Windows Program Manager. This is referred to as the **standalone mode** and the screen shown below will be displayed. It contains three items in the Menu bar: FILE, LIBRARY and SPECIAL.

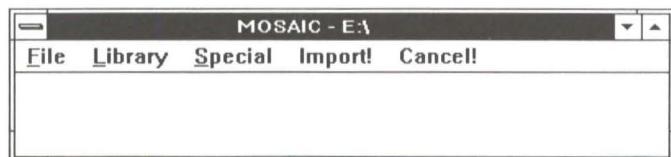


MOSAIC interface when opened in the standalone mode.

If MOSAIC is called from within CorelDRAW, referred to as its **CorelDRAW mode**, a similar screen is displayed, with five items in the Menu bar: FILE, LIBRARY, SPECIAL, and either OPEN or IMPORT, and finally, CANCEL. Only the *Open* and *Import* (CDR files only) commands from within CorelDRAW's FILE menu will activate MOSAIC.



MOSAIC interface when opened in CorelDRAW mode via the Open or Import command.

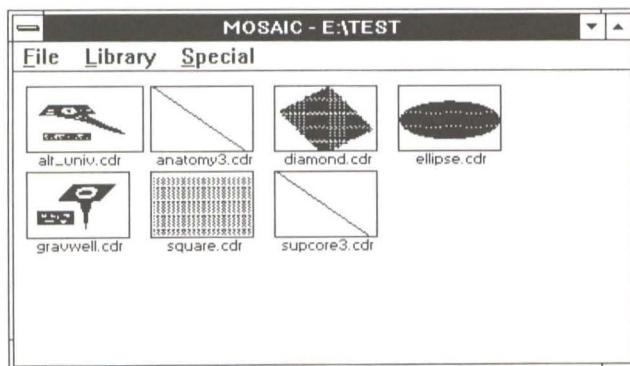


The MOSAIC Interface

MOSAIC offers a variety of features and functions. The most apparent feature of the program is its visual file selection interface.

If there are any CorelDRAW files in the current directory when MOSAIC is opened, the screen interface will contain an array of boxes. Each of these represents a CorelDRAW file and will have either a diagonal line running through it, or a small image of the drawing's contents within the boundary.

Visual File Selector



Only those files which were created in CorelDRAW 2.0 will display an image. This latest version of CorelDRAW creates a small monochrome bitmapped representation of your drawing and saves it along with the main image. MOSAIC in turn, accesses this bitmap and uses it for display purposes. Files created in previous versions of CorelDRAW will display a diagonal line until they have been opened in Version 2.0 and saved at least once.

Standalone Mode

If MOSAIC is opened in its **standalone mode**, then double-clicking on a CDR file (or clicking on the file and then selecting *Open* or *Import* under the FILE menu item) will automatically open CorelDRAW with your selected file. When you exit CorelDRAW, MOSAIC will still be active, but the program will be iconized in the Program Manager. You can either restore it or close the program.

CorelDRAW Mode

If you are within CorelDRAW and have configured it to use MOSAIC, then this program will be loaded whenever you choose to open or import a CDR file. This is MOSAIC's **CorelDRAW mode**. When the MOSAIC interface appears, you can change to any drive or directory to choose a file. Double-click on the file (or click on it and then click on the Open/Import menu bar item). The MOSAIC interface will then disappear (but the program remains iconized in the Program Manager) and you will return to CorelDRAW, with the chosen drawing being loaded.

Selection of Files

In either operational mode, file selection from the displayed images can be done by clicking on an image with the mouse, or by using the arrow keys on the numeric keypad. If the current directory contains more files than can be displayed on the screen, a vertical scroll bar will appear to the right of the main image field. Click on either the Up or Down arrow or the move the scroll bar thumb button to see more files.

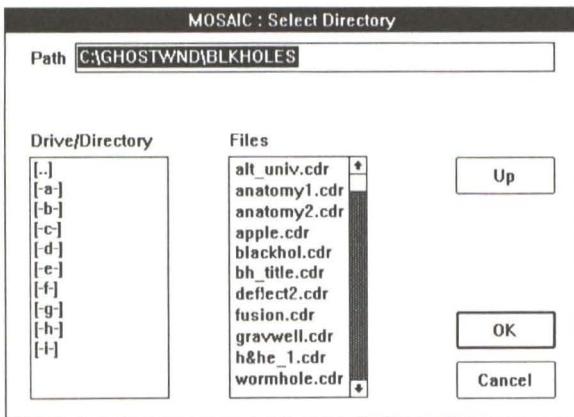
If you prefer to use the keyboard, the directional arrow keys (keypad's " \uparrow ", " \rightarrow ", " \downarrow " and " \leftarrow ") allow you to move from the current file to any of the adjacent ones. The End key allows you to quickly scroll through the entire file list. Pressing End once will highlight the file at the end of the current row. Pressing End again will highlight the file at the bottom right of the current screen page and pressing it once more will take you to the last file in the list, regardless of how many screens of files there are. Pressing Home repeatedly performs in the same way as End, except that you move toward the top of the file list. Page Up/Down may also be used to step through the list, one page of images at a time.

Finally, for some of MOSAIC's functions, it will be necessary to select more than one file. To do this, simply hold down the Shift key and select the required files by clicking on them with the mouse or by pressing the space bar.

Pulldown Menus

Select Directory

This allows you to change the current drive and/or directory that MOSAIC is displaying files from. Clicking on this item brings up the following dialog box:

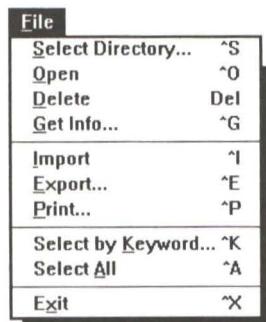


Use the drive and directory selector (left) to call the desired source directory. If the current directory contains any CDR files, their names will be displayed in the middle information field. Clicking or double-clicking on a file here will have no effect, since this field is for information only. You can use the *Up* button (right) to step up through subdirectory levels. When you have located the desired directory, double-click on it (or click on OK), and the CDR files within that directory will be displayed in the visual interface. (Note that if you wish to display the contents of CorelDRAW Library files (.CLB), you must use the *Select Library* command under the LIBRARY main menu item.)

Open

This command is only active once you have clicked on a file you wish to open. The file may be chosen from a visual list of CDR files within a directory, or from within a library. If it

File Menu Items



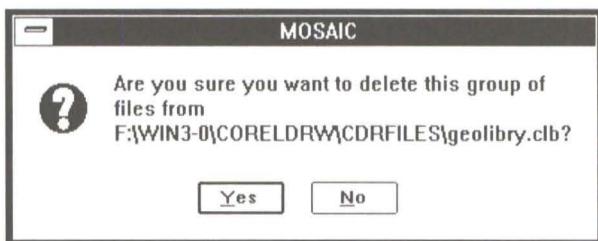
is opened from within a library, you will be prompted for a directory which the program will use to extract and decompress the file. CorelDRAW will then be opened and your file loaded. Only one file may be opened at a time.

Delete

This function is only active if you opened MOSAIC in standalone mode and it is used to delete a file from a specified drive and directory. To use it, simply select a file and click on *Delete*. A message will appear, asking you to confirm or cancel your action.

This function also applies to files within a library, allowing you to remove one or more files from an existing library. To do this, you must be viewing the contents of the library in MOSAIC's visual file selector. Select the file(s) you wish to delete and then click on *Delete*.

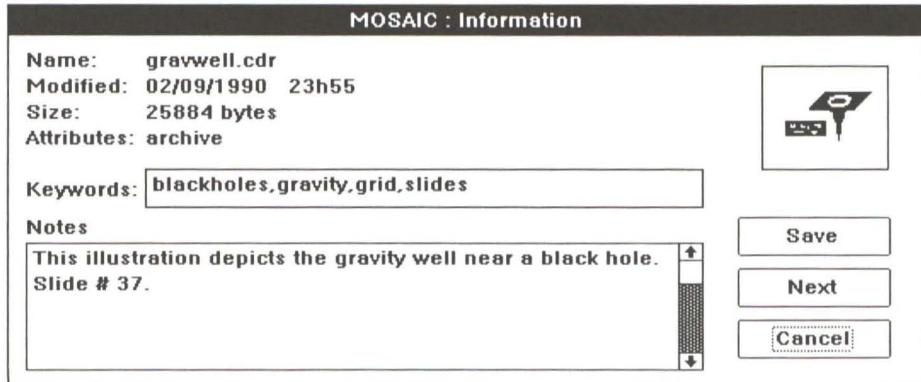
Again, a warning message will appear asking you to confirm this action, giving you a chance to change your mind. Respond as desired. Note that you can turn off these warnings via a selection under *Preferences* in the SPECIAL menu, detailed further on in this manual.



Get Info

This is one of MOSAIC's more subtle, but highly-useful features. With a file selected and this item chosen, the dialog box shown on the following page appears. This displays the Name of the file, the date and time it was last Modified, its Size and Attributes (ie/ archive, read-only, or hidden). The *Get Info* option, and Keywords & Notes below, are only available for files saved in CorelDRAW version 2.0.

The remaining two information fields, **Notes** and **Keywords**, are somewhat more unusual. Their functions are as follows.



Notes

MOSAIC allows you to annotate your work with notes that are saved along with your image file. This can be very useful, especially for logging things such as:

- Special effects used within the file
- Time spent creating the image (for the business end of things)
- Source of the idea or inspiration for the file
- Page number within a publication where the file is to be used
- Suggestions to yourself for future revisions or editing
- Instructions to others using your file

To add Notes, simply select a file, click on *Get Info* and place your cursor in the Notes field. When you have finished typing your text, click on *Save*.

Keywords

The Keywords box is an interesting feature. Its function is to permit you to code your files in such a manner that MOSAIC can search and select all files in a directory that have certain keywords in common. You can place as many words as you want in this field, but they must be separated from each other by a comma ",". To record your Keywords, click on *Save*.

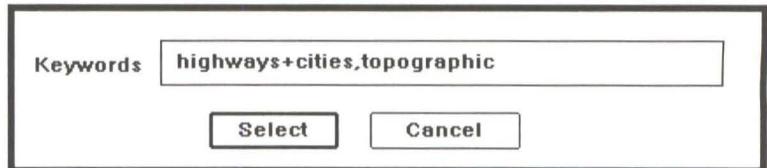
Next Button

If you selected a group of files and then clicked on *Get Info*, the *Next* button in this dialog box will step you through the Notes and Keywords for each file sequentially.

Select by Keyword

This menu item allows selection of all files in the current directory by the use of the keywords described above. Note that when using keywords, the program will ignore differences in the use of upper- and lowercase characters.

When you select this option, the following dialog box appears, prompting you for the keywords to use in the search.



You can enter as many keywords here as you wish. These must be separated by either a comma "," or a plus sign "+". When MOSAIC searches for matching keywords amongst files, it considers the comma to be an "or" statement and the plus sign to be an "and" condition. In other words, if you enter a number of keywords and separate them with a comma, MOSAIC will in turn select all files that have at least one of the specified keywords. If the keywords you enter are separated by a plus sign, MOSAIC will only select those files that contain all keywords so separated. You can also mix commas and plus signs when you specify the keywords to search.

To illustrate how this functions, suppose you have several map files in a directory. When you created these files, you assigned the following keywords:

- CANADA.CDR: map, Canada, topographic, highways
- EUROPE.CDR: Europe, map, demographic, capitals
- USA.CDR: USA, population, highways, cities, map
- ASIA.CDR: demographic, cities, map, capitals
- AUSTRAL.CDR: cities, highways, demographic, topographic

If you enter the keyword "map", then all of the example files will be selected, with the exception of AUSTRAL.CDR, since it does not contain "map" as a keyword. If however, you enter "map, demographic", then all will be selected, since

each one contains either "map", "demographic", or both. If only "demographic" is entered, all except CANADA.CDR and USA.CDR would be selected. To include USA.CDR in the group for future searches, you may want to change "population" to read "demographic". A search of "topographic" would identify only CANADA.CDR and AUSTRAL.CDR. Now specifying "highways+cities" as your keywords would identify USA.CDR and AUSTRAL.CDR. Specifying "highways+cities, topographic" would identify USA.CDR, AUSTRAL.CDR and CANADA.CDR, since they each contain *either* "highways and cities" *or* "topographic".

Import

This command is only active when one or more CorelDRAW files have been selected and is used to import them into a new or existing CorelDRAW file. Any number of CDR files may be selected for importing. The file(s) may be selected from a visual list of CDR files within a directory, or from within a library. If it is opened from within a library, you will be prompted for a directory which the program will use to extract and decompress the file(s). CorelDRAW will then be opened, and your file(s) imported onto the working page. Each imported file will consist of a group, making it easy to separate, scale and place in the new drawing file.

Export

This command is only active in the standalone mode and is used to Export one or more CDR files to any of the Export formats available through CorelDRAW. This allows batch exports to a single format, useful for instance, when you wish to export CDR files you have created to EPS format for use in Ventura Publisher or PageMaker. The restriction you must remember here is that all the files you select will be exported to the same format, with all export options you initially specify being applied to each file. You cannot change formats for example, or mark only some files as "All Fonts Resident" halfway through the batch export.

Once you have selected the files for export, click on Export. The program reverts to CorelDRAW, where you will be prompted for the Export parameters. You must also choose a destination directory and confirm the first filename in the group for your exported files. Specify this as required and click on OK. This begins the export process. The files will

be loaded into CorelDRAW and exported sequentially, retaining the original filename. The program automatically appends the correct extension to the filename, depending on the export format you have chosen. When all files have been exported, the program returns to MOSAIC.

Print

This command is only active in the standalone mode and is used to open CorelDRAW and print the selected file(s) from that program. Any number of CDR files may be selected for printing. The file(s) may be selected from a visual list of CDR files within a directory, or from within a library. If it is opened from within a library, you will be prompted for a directory which the program will use to extract and decompress the file(s). CorelDRAW will then be opened, and your file(s) loaded and printed.

Select All

This menu item allows selection of all files in the current directory.

Exit

This command exits MOSAIC and returns you to Windows if you entered the program in standalone mode, or returns you to CorelDRAW if MOSAIC was summoned from there.

Library Menu Items



One of MOSAIC's more powerful capabilities allows you to create libraries of files. This can be very useful, for a number of reasons. The creation of a library provides you with a way of storing your CDR files in a compressed form, thereby saving space on your hard drive. Perhaps more importantly, and depending on how you use CorelDRAW, a single library can be created from any number of files that may exist on different drives or directories on your computer. This in turn, permits you to run most of MOSAIC's features such as the keyword selection, slideshow, text extraction and merge back (via CorelDRAW, of course) on those files. Ordinarily this would be impossible to do without the library function, unless you copied them all into a single directory somewhere on your system. Bulk printing, file import and export are also possible from a library, with some restrictions. These and other uses of library files are detailed further on.

Note that when a library is created, it actually consists of **two** files. Each of these will have the same root name (the name you assign), but with different extensions; one will end in CLB and the other in CLH. This is important to know when moving libraries around on your system, either through the Windows File Manager or DOS. It's also important if you intend to put a library on a floppy disk for distribution. In either case, both files must be moved to the same drive or directory, or you will not be able to access the library.

The commands in the LIBRARY menu are only accessible when you summon MOSAIC in the standalone mode. Also, if you are viewing the files contained within a library, any file may be selected and loaded into CorelDRAW. Simply double-click on the drawing icon (or click on the icon and click again on Open\Import menu item) to load the file.

Select Library

This command is used to choose a library for viewing. You will be prompted for a drive and directory containing the library file(s). Double-click on the library file (*.CLB) you want to open. The contents will then be displayed.

Expand Image(s) to CDR

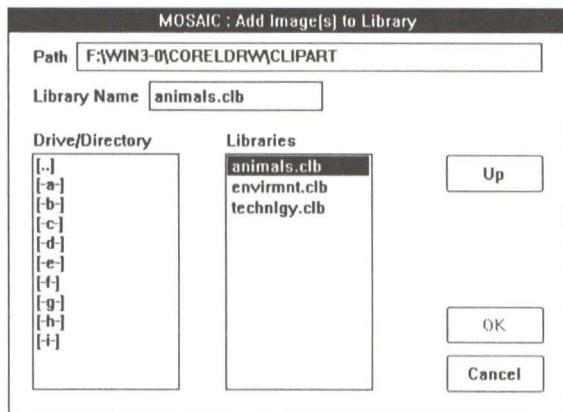
This command is used to extract one or more files from a library file. At least one file in the visual file selector must be highlighted. When you click on OK, you will be prompted for a directory in which to place the expanded CDR file(s). Select an appropriate directory and click on OK.

Add Image(s) to Library

This command is used to create a new library or add to an existing one. If you are creating a new one, at least one file in the visual file selector must be highlighted.

Clicking on this command will open a dialog box which allows you to specify the path (ie/ the drive and directory) where the library will be created. A name for the library must also be assigned here. It can be up to eight characters long, and the program will automatically append the CLB extension to the chosen name.

When you click on OK, a message appears informing you that the library file does not yet exist, and requesting your



Recommendation:

If you're creating libraries with the intention of saving disk space on your system, then we strongly suggest the following:

Before deleting your original CDR files, check the contents of the library to ensure the files have indeed been successfully archived. Certain odd equipment or software

configurations may cause difficulties with the archiving procedure. Once you have created a library, make certain that you can extract all the files it contains.

While this may seem time-consuming, it may save you a great deal more time than trying to recreate an original CDR file that you have no unarchived copies of.

confirmation to go ahead and create it. This may seem at first to be somewhat redundant, but it isn't really. It provides you with an option to abort the creation of the library. That can be handy, since the library you will create is not just a list of files, but in fact, a complete, highly-compressed collection of all the files. As such, the library creation procedure can take some time to complete, depending on the size and number of files it contains.

When you confirm the creation of the library, MOSAIC archives copies of the selected files. The creation of these compressed files in **no way** affects your originals. Note that if you have selected the "Confirm delete/overwrite" option in *Preferences* under the SPECIAL menu, you will be prompted to confirm the addition of each file to the library. If you want the archiving procedure to run automatically, simply deselect this option.

If you wish to add one or more files to an existing library, then you would also use the *Add Image(s) to Library* command. To do this, make sure that MOSAIC is displaying the CDR files in your chosen directory, as opposed to the contents of a library within that directory. This is important, since you cannot add a CDR file from within one library to another library; you can only add an **uncompressed** CDR file. You can tell at a glance whether or not you're viewing a library by checking the MOSAIC program title line. If it just reads MOSAIC and a drive & directory name, then you're viewing the CDR files within that directory. If you're viewing the contents of a library, the library name with the CLB extension will also appear on the title line. If you *are* viewing a library, simply click on the *Select Directory* command under the FILE menu. When the dialog box appears, change the drive and directory, as required. Click on OK. When the

CDR files are displayed, select the image(s) you wish to add to a library, then select the *Add Image(s) to Library* command under the LIBRARY menu. A dialog box appears, prompting you to choose the drive, directory and name of the library to which the selected CDR file(s) is to be added. Clicking on OK will commence the updating of the library archive file.

Delete Library

This command allows you to delete an entire library or libraries at once. When the dialog box appears following the selection of this command, choose the library or libraries you wish to delete. A warning message asking you to confirm this action will appear, giving you a chance to change your mind. Respond as desired. If you are currently viewing a library and have chosen to delete it, you will also receive a warning message requesting confirmation.

SlideShow

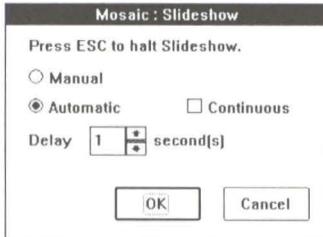
This is another of MOSAIC's interesting features. With *SlideShow*, you can select any number of files (but at least two) to be displayed sequentially in CorelDRAW's full screen preview mode. The two programs work together, with no interface screens displayed between slides. The list of files will be loaded and displayed in full preview in the order in which you select them, and with interval delays between the slides that you can specify. Note that you can only run the *SlideShow* option when MOSAIC is summoned in the standalone mode.

CDR files from within a single directory or library may be selected for your slideshow. The disadvantage of using library files is that they must first be decompressed before use. This means you must select a directory that MOSAIC will use to expand the files. If you have chosen many files, you must be sure that there is enough disk space available to allow for the decompression.

After you have chosen the files you wish to use, click on *SlideShow*. You will then be presented with a dialog box prompting you to specify what type of slideshow you want to run. Three choices are available: Automatic, Manual and Continuous.

Special Menu Items





The Automatic slideshow will only go through the list of files once, and can be halted at any time by pressing Esc. This is the default mode. The Continuous slideshow will repeatedly cycle through the list of files until the Esc key is pressed to stop it. The third mode, Manual, will provide a non-continuous slideshow that is also interruptible with the Esc keystroke. In this mode, slides are advanced by clicking on either mouse button. In any of the above modes, a message will be issued on pressing Esc, allowing you to end or continue the slideshow.

The delay time between slides for the Automatic and Continuous modes is specified in the box provided. Entries made here are in seconds, and can range from 1 second (default) to a maximum of 30,000 seconds (over 8 hours!). Note that the time delay is measured from the *end* of the screen drawing cycle of one file to the *beginning* of the loading cycle of the next one.

Extract and Merge Back

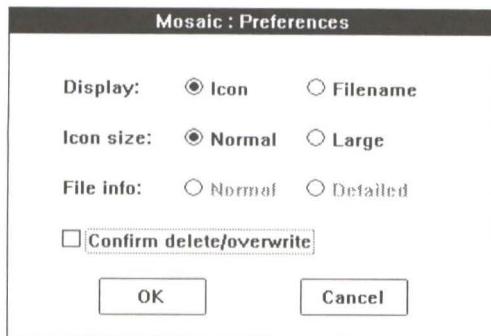
These two related functions operate as explained in the main CorelDRAW User's manual. However, through MOSAIC running in standalone mode, you can run batch (ie/ multiple) extractions and merge backs. To do this, simply select the files you wish to perform the text extraction on and click on Extract. CorelDRAW is opened and the appropriate text files (.TXT) are created. All text files will be placed in the directory you specify for the first one. Leave them in that directory if you're planning a batch merge back.

To perform a batch Merge Back, again, select the desired graphics files and click on Merge Back. When DRAW is opened, the merge back proceeds. You will be prompted to select the directory for the text files; they must **all** be in the **same** directory. The selected graphic files **must** all have text file with matching names, otherwise the batch merge back

will fail. After each drawing and text file has been merged, a dialog box appears, prompting you to save the changed file in CorelDRAW before the next file merge back begins.

Preferences Menu Item

The Preferences menu item allows you to set up certain display and operational parameters of MOSAIC. This menu item and the options it contains are available in both modes of running MOSAIC. Clicking on it brings up the following dialog box:



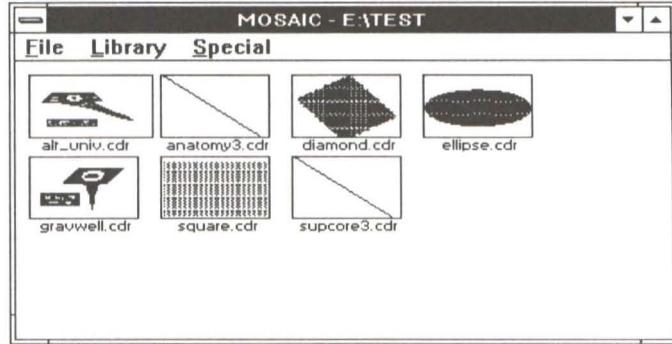
Display: Icon or Filename

This option allows you to display the files within a directory or library either as **Icons** or strictly by their textual **Filenames**. If you select **Icon** display, you have a further choice of either *Normal* or *Large* size. If you select **Filename**, then again, you have a further choice of either *Normal* or *Detailed* file information.

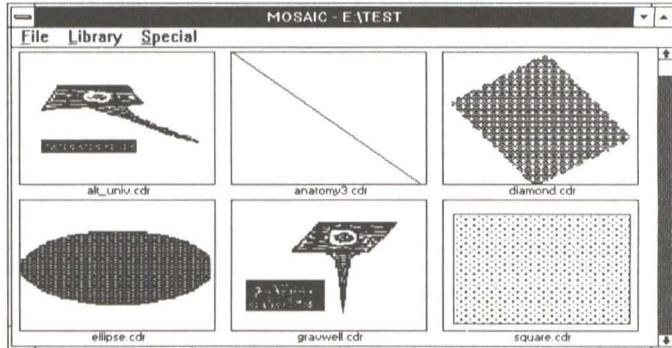
Icon Size: Normal or Large

This preference may only be set if you chose Icon Display above. A typical **Normal**-size icon display is shown overleaf.

Selecting **Large**-size icons causes the displayed icons to be much larger. This results in greater detail being visible in each icon, but fewer icons per page and therefore, more pages to scroll through if you're searching for a particular file. A typical display is also shown overleaf.



Normal icon display



Large icon display

File Info: Normal or Detailed

This preference may only be set if you chose the "Display: Filename" item. This option is used to display the files within a directory or library as text in MOSAIC's visual file selector. Choosing **Normal** will result in a listing of only the CDR filenames within the current directory. Choosing **Detailed** provides additional information for each file, as shown below. The data includes creation date, file size, and file attributes (ie/ archive, read-only, or hidden).

File	Library	Special	
alt_univ.cdr		19/11/1989 01h54	20487 bytes
anatomy1.cdr		06/12/1989 08h54	76851 bytes
anatomy2.cdr		06/12/1989 09h05	87486 bytes
anatomy3.cdr		13/07/1990 22h08	77839 bytes
anisotropic.cdr		22/11/1989 00h57	23040 bytes
bh_title.cdr		19/11/1989 11h53	33186 bytes
bhitorn.cdr		19/12/1989 21h24	45331 bytes
deflect2.cdr		03/06/1990 00h34	92867 bytes
fusion.cdr		19/11/1989 03h34	31005 bytes
gravwell.cdr		19/11/1989 03h34	22440 bytes
h&e.cdr		03/06/1990 01h03	5156 bytes
h&e_1.cdr		03/06/1990 01h02	6893 bytes
h&e_2.cdr		03/06/1990 02h50	9333 bytes
hevbail.cdr		19/11/1989 03h57	5530 bytes
lensbeam.cdr		18/12/1989 00h57	10228 bytes
litebeam.cdr		19/11/1989 01h17	32668 bytes
medvball.cdr		17/11/1989 02h27	4318 bytes
multworm.cdr		27/08/1990 04h42	40854 bytes
normolan.cdr		27/11/1989 13h50	3490 bytes
supcore1.cdr		02/08/1990 03h58	8088 bytes
supcore2.cdr		02/08/1990 03h59	12005 bytes
supcore3.cdr		27/08/1990 05h31	9775 bytes
twoballs.cdr		19/11/1989 03h55	10160 bytes
wormuniv.cdr		27/11/1989 14h32	31602 bytes

Confirm delete/overwrite

With this option selected, all file operations involving the deletion or overwriting of files will generate a dialog box asking you to confirm the action you requested. The selection of this item will also prompt you for each file you wish to add to a library.

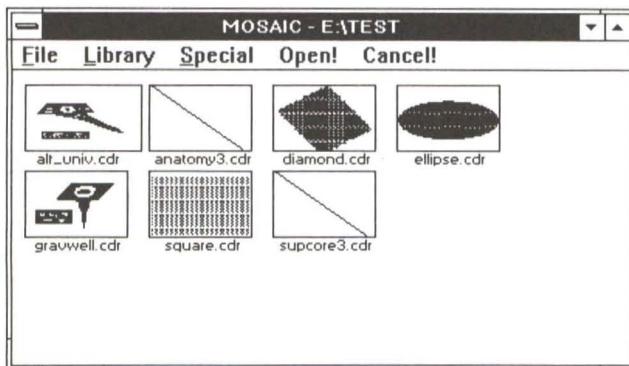
If this option is not selected, the file operations will proceed automatically, once you have responded to any specific dialog boxes the operations themselves may generate. No warning of file deletions or overwrites will be issued.

About MOSAIC

This final item under the SPECIAL menu generates a small dialog box containing details about the MOSAIC program, such as its version number.

These items only appear in the menu bar when MOSAIC has been summoned from within CorelDRAW, ie/ MOSAIC's CorelDRAW mode. They are single commands with no associated pulldown menus.

Open/Import and Cancel



Either *Open* or *Import* will appear in the menu bar when running MOSAIC in this mode. Their functions are simply to open or import a CDR file into CorelDRAW once it has been selected from MOSAIC's visual file selector. When you click on *Open (Import)*, the MOSAIC interface will disappear and the requested file will either be opened (or imported) into CorelDRAW.

Cancel simply closes MOSAIC and returns you to CorelDRAW.

MOSAIC and the CorelDRAW Clipart Libraries

MOSAIC is an ideal tool for viewing the various Clipart Libraries supplied with Version 2.0 of CorelDRAW.

In order to access these, they should be copied from the original floppy disks into a directory on your hard drive. Create a new directory, such as:

C:\WINDOWS\CORELDRW\CLIPART

You can do this either through DOS or a file management utility such as the Windows File Manager. Remember however, each library actually consists of two files with the same name, but different extensions, such as: "ANIMAL.CLB and ANIMALS.CLH". Both of these files must be copied into the same directory on your hard drive, or else you will not be able to properly access the files they contain.

Once you have copied the files over, use MOSAIC to view the library contents. You may then open the files into CorelDRAW as desired.



COREL

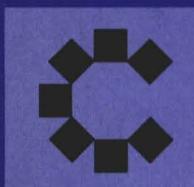
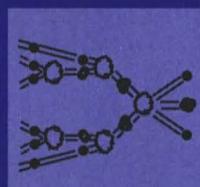
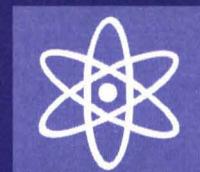
COREL SYSTEMS CORPORATION

1600 Carling Ave

Ottawa, Ontario K1Z 8R7

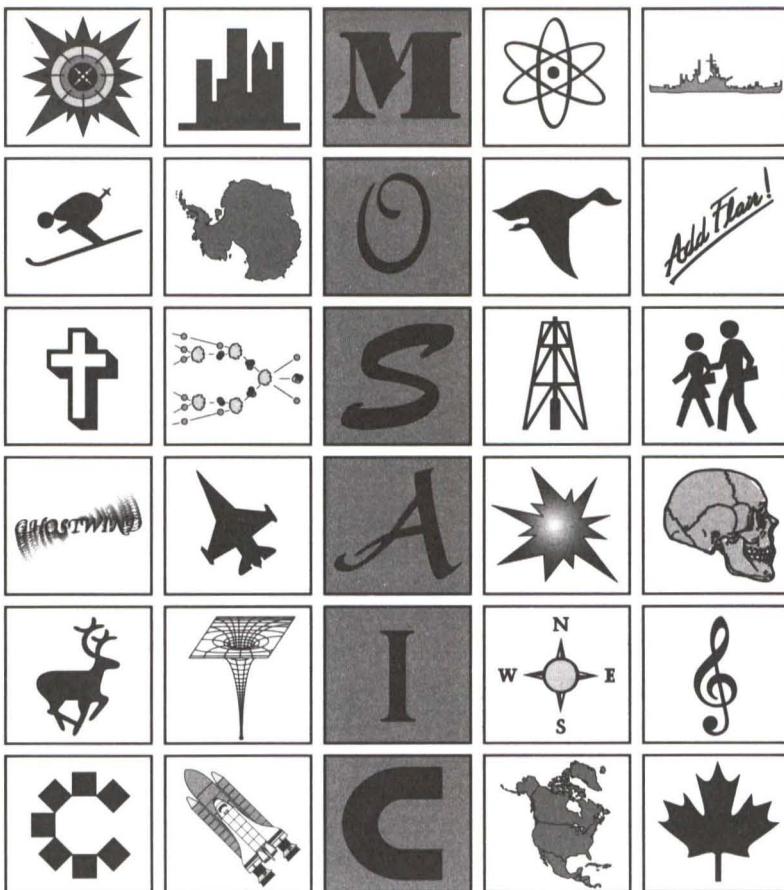
Tel : (613)728-8200

Fax : (613)728-9790



V I S U A L F I L E M A N A G E R

COREL DRAW!



V I S U A L
F I L E
M A N A G E R

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COREL MOSAIC, Version 1.0

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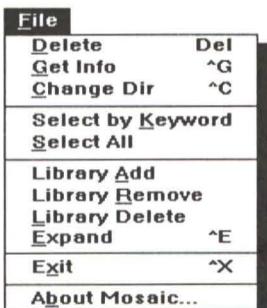
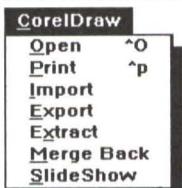
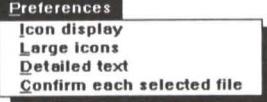
Phone: 613-728-8200

FAX: 613-728-9790

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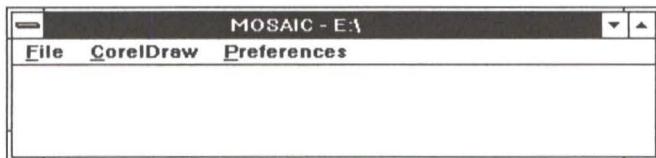
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Introduction

MOSAIC is a new utility supplied for the first time with this release of CorelDRAW. It is a multi-purpose program designed to make the manipulation of your CorelDRAW files much easier. MOSAIC can be opened in one of two ways, either as a separate program under Windows, or you can configure CorelDRAW to use MOSAIC directly. This is done via DRAW's *Preferences* command under its SPECIAL pulldown menu item (see the User's manual for more information). MOSAIC performs differently, depending on which of these two ways it is called.

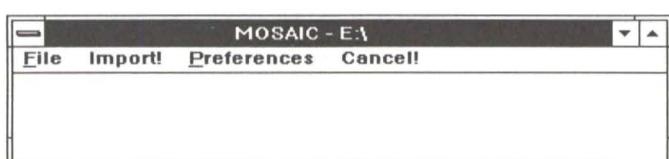
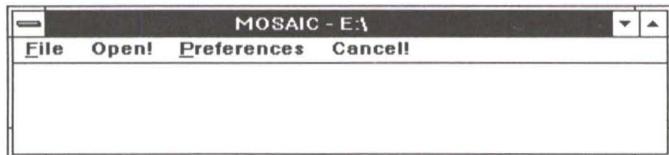
To open MOSAIC as a separate program, simply double-click on the MOSAIC icon in the Corel Program Group in the Windows Program Manager. This is referred to as the **standalone mode** and the screen shown below will be displayed. It contains three items in the Menu bar: **File**, **CorelDRAW** and **Preferences**.

MOSAIC interface when opened in the standalone mode.



If MOSAIC is called from within CorelDRAW, referred to as its **CorelDRAW mode**, a similar screen is displayed, with four items in the Menu bar: File, either Open or Import, Preferences, and Cancel. Only the Open and Import (CDR files only) commands from within CorelDRAW will activate MOSAIC.

MOSAIC interface when opened in CorelDRAW mode via the Open or Import command.

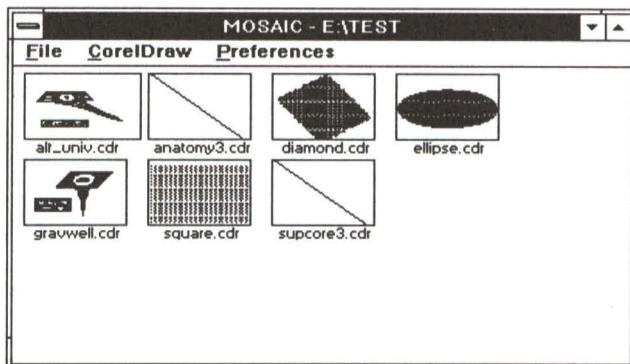


The MOSAIC Interface

MOSAIC offers a variety of features and functions. The most apparent feature of the program is its visual file selection interface.

If there are any CorelDRAW files in the current directory when MOSAIC is opened, the screen interface will contain an array of boxes. Each of these represents a CorelDRAW file and will have either a diagonal line running through it, or a small image of the drawing's contents within the boundary.

Visual File Selector



Only those files which were created in CorelDRAW 2.0 will display an image. This latest version of DRAW creates a small monochrome bitmapped representation of your drawing and saves it along with the main image. MOSAIC in turn, accesses this bitmap and uses it for display purposes. Files created in previous versions of CorelDRAW will display a diagonal line until they have been opened in Version 2.0 and saved at least once.

If MOSAIC is opened in its *standalone mode*, then double-clicking on a file (or clicking and selecting Open under the CorelDRAW menu item) will automatically open DRAW with your selected file. If you have the *Confirm each*

Standalone Mode

selected file option selected under the *Preferences* menu, a message will appear on screen asking you to confirm the opening of the chosen file. You can proceed or cancel the request, as desired. If you are Importing multiple CDR files into DRAW, you will only receive this message for the first file. If you choose to proceed, then all files will be imported without interruption.

CorelDRAW Mode

If you are within CorelDRAW and have configured it to use MOSAIC, then this program will be loaded whenever you choose to open or import a file. This is MOSAIC's *CorelDRAW mode*. When the MOSAIC interface appears, you can change to any drive or directory to choose a file. Double-click on the file (or click on it and click again on the Open/Import menu bar item). The MOSAIC interface will then disappear (but the program remains iconized in the Program Manager) and you will return to CorelDRAW, with the chosen drawing being loaded.

Selection of Files

In either mode, the selection of files from the displayed images can be done by clicking on an image with the mouse, or by using the arrow keys on the numeric keypad. If the current directory contains more files than can be displayed on the screen, a vertical scroll bar will appear to the right of the main image field. Click on either the Up or Down arrow or the move the scroll bar thumb button to see more files.

If you prefer to use the keyboard, the directional arrow keys (keypad's " \uparrow ", " \rightarrow ", " \downarrow " and " \leftarrow ") allow you to move from the current file to any of the adjacent ones. The End key allows you to quickly scroll through the entire file list. Pressing End once will highlight the file at the end of the current row. Pressing End again will highlight the file at the bottom right of the current screen page and pressing it once more will take you to the last file in the list, regardless of how many screens of files there are. Pressing Home repeatedly performs in the same way as End, except that you move toward the top of the file list. Page Up/Down may also be used to step through list, one screen page of images at a time.

Finally, for some of MOSAIC's functions, it will be necessary to select more than one file. To do this, simply hold down the Shift key and select the required files by clicking on them with the mouse or by pressing the space bar.

Pulldown Menus

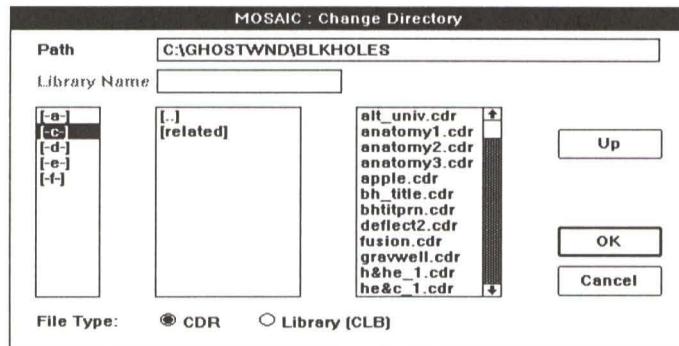
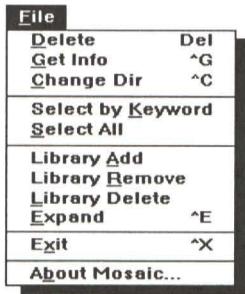
Delete

This function is used to delete a file from a specified drive and directory. To use it, simply select a file and click on Delete. A message will appear, asking you to confirm or cancel your action. This function does **not** apply to files within a library.

Change Dir

This allows you to change the current directory that MOSAIC is displaying files from. Clicking this function brings up the following dialog box.

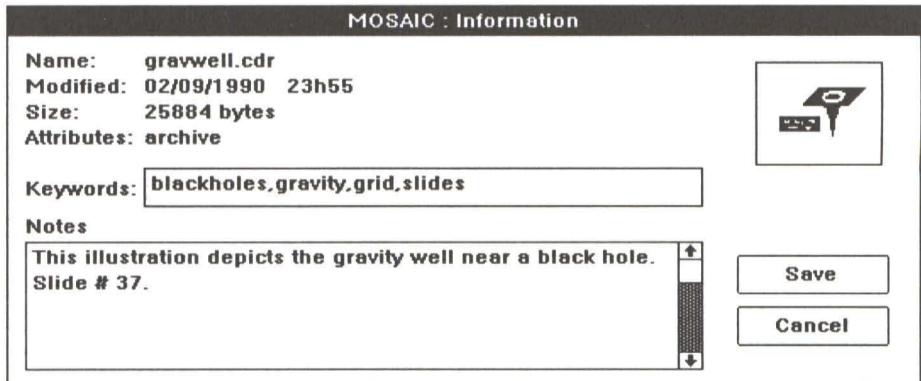
File Menu Items



Use the drive selector (extreme left) and the adjacent directory selector to call the desired source directory. You can also specify whether to display CorelDRAW files (.CDR) or the contents of CorelDRAW Library files (.CLB) in the list box to right of the directory selector. Simply click on the desired radio button at the bottom of the dialog box to select the file type.

Get Info

This is one of MOSAIC's more subtle, but highly-useful features. With a file selected and this item chosen, the following dialog box appears:



This displays the name of the file, the date and time it was last modified, its size and attributes (ie/ archive, read-only, or hidden). The *Get Info* option, and Keywords & Notes below, are only available for files saved in CorelDRAW version 2.0.

The remaining two information fields, Keywords and Notes, are the unusual ones.

Notes

MOSAIC allows you to annotate your work with notes that are saved along with your image file. This can be very useful, especially for logging things such as:

- Special effects used within the file
- Time spent creating the image (for the business end of things)
- Source of the idea or inspiration for the file
- Page number within a publication where the file is to be used
- Suggestions to yourself for future revisions or editing
- Instructions to others using your file

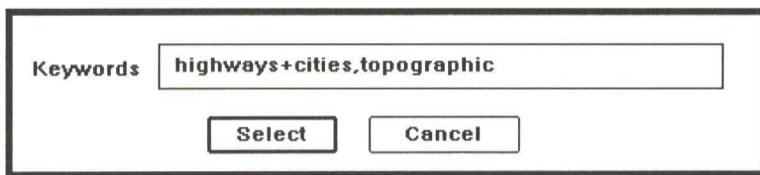
Keywords

The Keywords box is an interesting feature. Its function is to permit you to code your files in such a manner that MOSAIC can search and select all files in a directory that have certain keywords in common. You can place as many words as you want in this field. These words must be separated from each other by a comma ",".

Select by Keyword

This menu item allows selection of all files in the current directory by the use of the keywords described above. Note that when using keywords, the program will ignore differences in the use of upper- and lowercase characters.

When you select this option, the following dialog box appears, prompting you for the keywords to use in the search.



You can enter as many keywords here as you wish. These must be separated by either a comma "," or a plus sign "+". When MOSAIC searches for matching keywords amongst files, it considers the comma to be an "or" statement and the plus sign to be an "and" condition. In other words, if you enter a number of keywords and separate them with a comma, MOSAIC will in turn select all files that have at least one of the specified keywords. If the keywords you enter are separated by a plus sign, MOSAIC will only select those files that contain all keywords so separated. You can also mix commas and plus signs when you specify the keywords to search.

To illustrate how this functions, suppose you have several map files in a directory. When you created these files, you assigned the following keywords:

- CANADA.CDR: map, Canada, topographic, highways
- EUROPE.CDR: Europe, map, demographic, capitals
- USA.CDR: USA, population, highways, cities, map
- ASIA.CDR: demographic, cities, map, capitals
- AUSTRAL.CDR: cities, highways, demographic, topographic

If you enter the keyword "map", then all of the example files will be selected, with the exception of AUSTRAL.CDR, since it does not contain "map" as a keyword. If however, you enter "map, demographic", then all will be selected, since each one contains either "map", "demographic", or both. If only "demographic" is entered, all except USA.CDR would be selected. To include USA.CDR in the group for future searches, you may want to change "population" to read "demographic". A search of "topographic" would identify only CANADA.CDR and AUSTRAL.CDR. Now specifying "highways+cities" as your keywords would identify USA.CDR and AUSTRAL.CDR. Specifying "highways+cities, topographic" would identify USA.CDR, AUSTRAL.CDR and CANADA.CDR, since they each contain *either* "highways and cities" *or* "topographic".

Select All

This menu item allows selection of all files in the current directory.

Library Commands

One of MOSAIC's more powerful capabilities allows you to create libraries of files. This can be very useful, for a number of reasons. The creation of a library provides you with a way of storing your CDR files in a compressed form, thereby saving space on your hard drive. Perhaps more importantly, and depending on how you use CorelDRAW, a single library can be created from any number of files that may exist on different drives or directories on your computer. This in turn, permits you to run most of MOSAIC's features such as the keyword selection, slideshow, text extraction and merge back (via CorelDRAW, of course) on those files. Ordinarily this would be impossible to do without the library function,

unless you copied them all into a single directory somewhere on your system. Bulk printing, file import and export are also possible from a library, with some restrictions. These and other uses of library files are detailed further on in the sections covering the commands under the CorelDRAW menu item.

Note that when a library is created, it actually consists of **two** files. Each of these will have the same root name (the name *you* assign), but with different extensions; one will end in CLB and the other in CLH. This is important to know when moving libraries around on your system, either through the Windows File Manager or DOS. It's also important if you intend to put a library on a floppy disk for distribution. In either case, both files must be moved to the same drive or directory, or you will not be able to access the library.

The three library commands under MOSAIC's file menu are accessible regardless of which mode you used to summon MOSAIC. Also, if you are viewing the files contained within a library, any file may be selected and loaded into CorelDRAW. Simply double-click on the drawing icon (or click on the icon and click again on Open\Import menu item) to load the file into DRAW.

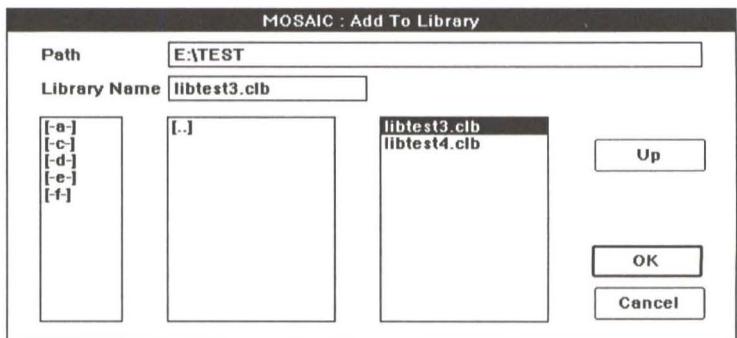
Expand

This command is used to extract one or more files from a library file. At least one file in the visual file selector must be highlighted. When you click on OK, you will be prompted for a directory in which to place the expanded CDR file. Select an appropriate directory and click on OK.

Library Add

This command is used to create a new library or add to an existing one. If you are creating a new one, at least one file in the visual file selector must be highlighted.

Clicking on the Library Add command will open a dialog box which allows you to specify on what drive and in which directory the library will be created. A name for the library must also be assigned here. It can be up to eight characters long, and the program will automatically append the CLB extension to the chosen name.



When you click on OK, a message appears informing you that the library file does not yet exist, and requesting your confirmation to go ahead and create it. This may seem at first to be somewhat redundant, but it isn't really. It provides you with a final option to check the library's spelling or to abort the creation of the library entirely. That can be handy, since the library you will create is not just a list of files, but in fact, a complete, highly-compressed collection of all the files. As such, the library creation procedure can take some time to complete, depending on the size and number of files it contains.

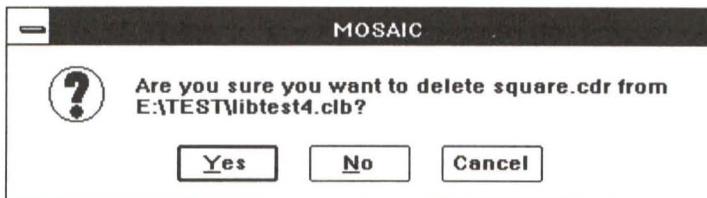
When you confirm the creation of the library, the program will temporarily go into a DOS window (386-class computers only) or a DOS shell (286-class machines) and summon an archiving program called LHARC. This same program is used to compress the files on your original CorelDRAW disks, and is installed automatically in your CorelDRAW directory when you first load DRAW. When LHARC has finished compressing the files contained in your library, the program returns to MOSAIC for further operations. Note that the creation of these compressed files in **no way** affects your originals.

If you wish to add one or more files to an existing library, then you would also use the Library Add command. To do this, make sure that MOSAIC is displaying the CDR files in your chosen directory, as opposed to the contents of a library within that directory. This is important, since you cannot add a CDR file from within one library to another library; you can only add an uncompressed CDR file. You can tell at a glance whether or not you're viewing a library by checking the MOSAIC program title line. If it just reads MOSAIC and a

drive & directory name, then you're viewing the CDR files within that directory. If you're viewing the contents of a library, the library name with the CLB extension will also appear on the title line. If you are viewing a library, simply click on the *Change Dir* command under the file menu. When the dialog box appears, click on CDR as your *File Type* at the bottom, and then change the drive and directory, if required. Click on OK. When the CDR files are displayed, select the one you wish to add to a library then select Library Add under MOSAIC's File menu. A dialog box appears, prompting you to choose the drive, directory and name of the library to which the selected CDR file(s) is to be added. Clicking on OK will commence the updating of the library archive file. As with the creation of a new library, the program temporarily exits to either a DOS windows or a DOS shell to perform this function.

Library Remove

This command allows you to remove one or more files from an existing library. To do this, you must be viewing the contents of the library in MOSAIC's visual file selector. Select the file(s) you wish to delete and choose the Library Remove command from under the File menu. A warning message will appear asking you to confirm this action, giving you a chance to change your mind. Respond as desired.



Library Delete

This command allows you to delete an entire library or libraries at once. Choose the Library Delete command from under the File menu. When the dialog box appears, choose the library or libraries you wish to delete. A warning message asking you to confirm this action will appear, giving you a chance to change your mind. Respond as desired. If you are currently viewing a library and have chosen to delete it, you will receive two levels of warning messages asking you to confirm your action.

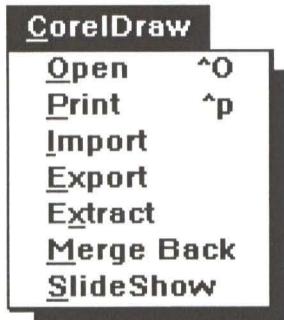
Exit

This command exits MOSAIC and returns you to Windows if you entered the program in standalone mode, or returns you to CorelDRAW if MOSAIC was summoned from there.

About MOSAIC

This command generates a small dialog box containing details about the MOSAIC program.

CorelDRAW Menu Items



Open

This command is used to open CorelDRAW and load a selected file into that program. The file may be selected from a visual list of CDR files within a directory, or from within a library. If it is opened from within a library, you will be prompted for a directory which the program will use to extract and decompress the file. CorelDRAW will then be opened and your file loaded. Only one file may be opened at a time.

Print

This command is used to open CorelDRAW and print the selected file(s) from that program. Any number of CDR files may be selected for printing. The file(s) may be selected from a visual list of CDR files within a directory, or from within a library. If it is opened from within a library, you will be prompted for a directory which the program will use to extract and decompress the file(s). CorelDRAW will then be opened, and your file loaded and printed.

Import

This command is used to import one or more CorelDRAW files into a new or existing CorelDRAW file. Any number of CDR files may be selected for importing. The file(s) may be selected from a visual list of CDR files within a directory, or from within a library. If it is opened from within a library,

you will be prompted for a directory which the program will use to extract and decompress the file(s). CorelDRAW will then be opened, and your file(s) imported onto the working page. Each imported file will consist of a group, making it easy to separate, scale and place in the new drawing file.

Export

This command is used to Export one or more CDR files to any of the Export formats available through CorelDRAW. This allows batch exports to a single format, useful for instance, when you wish to export CDR files you have created to EPS format for use in Ventura Publisher or PageMaker. The restriction you must remember here is that all the files you select will be exported to the same format, with all export options you initially specify being applied to each file. You cannot change formats for example, or mark only some files as "All Fonts Resident" halfway through the batch export.

Once you have selected the files for export, click on Export. The program reverts to CorelDRAW, where you will be prompted for the Export parameters. You must also choose a destination directory for your exported files. Specify this as required and click on OK. This begins the export process. The files will be loaded into DRAW and exported sequentially, retaining the original filename. The program automatically appends the correct extension to the filename, depending on the export format you have chosen. When all files have been exported, the program returns to MOSAIC.

Extract and Merge Back

These two related functions operate as explained in the main CorelDRAW User's manual. However, through MOSAIC, you can run batch (ie/ multiple) extractions and merge backs. To do this, simply select the files you wish to perform the text extraction on and click on Extract. CorelDRAW is opened and the appropriate text files (.TXT) are created. All text files will be placed in the directory you specify for the first one. Leave them in that directory if you're planning a batch merge back.

To perform a batch Merge Back, again, select the desired graphics files and click on Merge Back. When DRAW is opened, the merge back proceeds. You will be prompted to

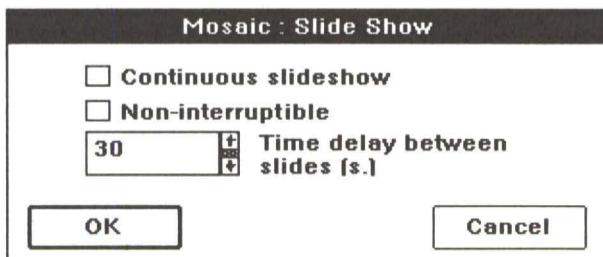
select the directory for the text files; they must **all** be in the **same** directory. The selected graphic files **must** all have text file with matching names, otherwise the batch merge back will fail. After each drawing and text file has been merged, you will be required to save it in CorelDRAW before the next file merge begins.

SlideShow

This is another of MOSAIC's interesting features. With SlideShow, you can select any number of files (but at least two) to be displayed sequentially in CorelDRAW's full screen preview mode. The two programs work together, with no interfaces screens displayed between slides. The list of files will be loaded and displayed in full preview, and with interval delays between the slides that you can specify.

CDR files displayed from within a directory or from within a library may be selected for your slideshow. The advantage of using files from within a library is that they can be chosen from any drive or directory on your computer. If you use CDR files displayed from within a directory (ie/ non-library files), your slideshow can only contain files from within that directory. The disadvantage of using library files is that they must first be decompressed before use. This means you will have to select a directory that MOSAIC will use to expand the files. If you have chosen many files, you must be sure that there is enough disk space available to allow for the decompression.

After you have chosen the files you wish to use, click on SlideShow. You will then be presented with a dialog box prompting you to specify what type of slideshow you want to run. Two choices are immediately apparent: Continuous and Non-interruptible.



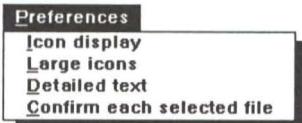
The Continuous slideshow will repeatedly cycle through the list of files until a key is pressed to stop it. A message will be issued on a keystroke, allowing you to end or continue the slideshow. The Non-interruptible will only go through the list of files once, but it cannot be interrupted by a keystroke once it is started.

A third choice is actually available, and this is accessed by running the slideshow with *neither* of the two options in the dialog box selected. This will provide a non-continuous slideshow that is also interruptible with any keystroke.

For any of the three modes, you can select the time between slides in the box provided. Entries you make here are in seconds, with a maximum display between slides of 30,000 seconds (over 8 hours!). The time delay here is measured from the *end* of the screen drawing cycle of one file to the *beginning* of the loading cycle of the next one.

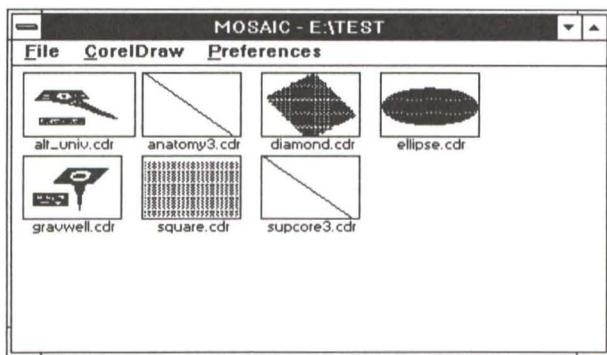
The Preferences menu allows you to set up certain display and operational parameters of MOSAIC. This menu item and the commands it contains are available in both modes of running MOSAIC.

Preferences Menu Items



Icon display

This option is used to display the files within a directory or library as icons in MOSAIC's visual file selector. With this option selected, the "Detailed text" option is not available.

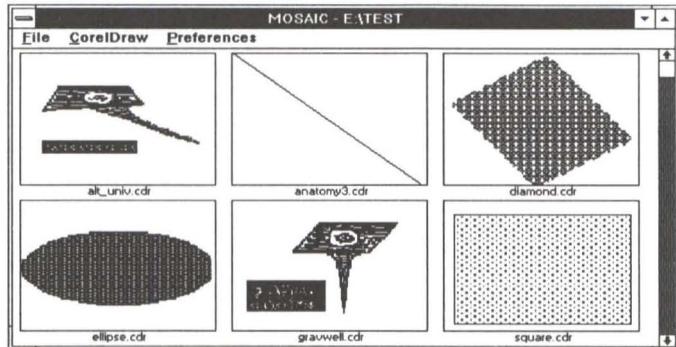


If you de-select Icon display, then only the CDR file names in the current directory will be listed, but the Detailed text option becomes available for selection.

Large icons

Like the Icon display option, the Large Icon option is used to display the files within a directory or library as icons.

Selecting Large icons however, causes the displayed icons to be much larger. This results in more detail being visible in each icon, but fewer icons per page and more pages to scroll through if you're searching for a particular file.



Detailed text

This option is used to display the files within a directory or library as text in MOSAIC's visual file selector. To select this mode, simply de-select the Icon Display command, then click on Detailed text.

MOSAIC - C:\GHOSTWORLD\KHOLEs					
File	CorelDraw	Preferences			
alt_univ.cdr	19/1/1/1989	01h54	20487 bytes		
anatomy1.cdr	06/1/2/1989	08h54	76851 bytes		
anatomy2.cdr	06/1/2/1989	09h05	87486 bytes		
anatomy3.cdr	19/1/1/1989	20h57	77121 bytes		
apple.cdr	22/1/1/1989	20h57	28925 bytes		
bh_title.cdr	19/1/1/1989	11h53	33188 bytes		
bhitlorn.cdr	19/1/2/1989	21h24	45331 bytes		
deflect2.cdr	03/0/6/1990	00h34	92887 bytes		
fulton.cdr	19/1/1/1989	11h54	31861 bytes		
greenball.cdr	19/1/1/1989	02h09	22121 bytes		
h&he_1.cdr	03/0/6/1990	01h03	6166 bytes		
he&c_1.cdr	03/0/6/1990	01h02	6893 bytes		
he&c_2.cdr	03/0/6/1990	02h50	9335 bytes		
helix.cdr	19/1/1/1989	00h57	5633 bytes		
lensbend.cdr	18/1/2/1989	00h57	10328 bytes		
litebend.cdr	19/1/1/1989	01h17	32868 bytes		
medvball.cdr	17/1/1/1989	02h27	4318 bytes		
multworm.cdr	27/1/0/1990	04h42	49554 bytes		
newcore1.cdr	20/1/0/1990	04h42	34096 bytes		
supcore1.cdr	02/0/6/1990	23h58	8080 bytes		
supcore2.cdr	03/0/6/1990	00h09	12806 bytes		
supcore3.cdr	27/0/0/1990	05h31	9775 bytes		
twoballs.cdr	19/1/1/1989	03h55	10160 bytes		
wormuniv.cdr	27/1/1/1989	14h32	31802 bytes	archive	

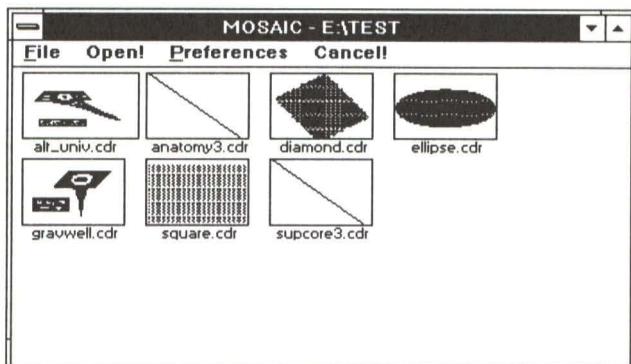
Data concerning the files is presented, including creation date, file size, and file attributes (ie/ archive, read-only, or hidden). With this option selected, the Large Icon option described above is not available.

Confirm each selected file

With this option selected, all file operations will generate a dialog box asking you to confirm the action you requested for the particular file about to be processed. If this option is not selected, the file operations will proceed automatically, once you have responded to any specific dialog boxes they themselves may generate.

These items only appear in the menu bar when MOSAIC has been summoned from within CorelDRAW. They are single commands with no associated pulldown menus.

***Open/Import and
Cancel***



Open (or Import, if that's how MOSAIC was called) takes the place of CorelDRAW in the menu bar when running MOSAIC in this mode. Its function is simply to open (or import) a CDR file into CorelDRAW once it has been selected from MOSAIC's visual file selector. When you click on open (import), the MOSAIC interface will disappear and the requested file will either be opened (or imported) into CorelDRAW.

Cancel closes MOSAIC and returns you to CorelDRAW.

Notes



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**TYPEFACE
CONVERSION
& CREATION**

WFN BOSS

and

**Symbols / Typeface
Export Filter**

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CORELDRAW!

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**TYPEFACE
CONVERSION
& CREATION**

WFN BOSS
and
Symbol/Typeface
Export Filter

Guide to Operation

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WFN Typeface Creation and Conversion Guide

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PRINTED IN CANADA



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Introduction to WFN Fonts

The release of CorelDRAW 2.0 brings many new capabilities to the program, making it more powerful and versatile than ever. One of the more interesting features is also one that may not be immediately apparent on examining the new interface. *It is the ability to turn CorelDRAW into a highly-functional font editor!* Two separate features go into the making of this editor, and they are the subject of this guide.

If you are familiar with CorelDRAW, you will recognize one of them, namely the **WFN BOSS Typeface Conversion Utility**. This stand-alone program runs under Windows 3.0 and is covered in Section 1 of this guide. It is used to convert typefaces from many different manufacturers into WFN fonts, CorelDRAW's native typeface format. *This lets you add thousands of new typefaces to the over 150 currently packaged with CorelDRAW!* With this new version of WFN BOSS, we've also added the capability of converting WFN fonts to Adobe Type 1 format. You can now transform any CorelDRAW fonts into typefaces for use in numerous other applications outside of CorelDRAW!

The second feature is new to this release, and unlike WFN BOSS, it is part of the main CorelDRAW program. It's the **Corel Symbol & Typeface Export Filter**, covered in Section 2 of this guide. *This program feature allows you to use CorelDRAW to actually edit the shape of any character in any WFN typeface or symbol file!* This is a powerful capability indeed, since it lets you customize typefaces in any way you want, or create wholly new sets of typefaces or symbol libraries. The new symbol libraries supplied with this version of CorelDRAW were all created using this filter. Since these are all WFN typeface files, you can modify or expand them in any way you want. Coupled with WFN BOSS's ability to convert WFN typefaces to Adobe and ZSoft's formats, you can now create completely customized typefaces and symbol sets for use with Ventura Publisher, PageMaker, Word for Windows, Excel and a host of others!

The following two pages list the typefaces that come supplied with CorelDRAW, along with the trademarked typeface names which they closely resemble. You'll find this list useful when working with either WFN BOSS or the Symbol & Typeface Export Filter. You'll also want to keep your Typeface Reference Chart and Character Reference Chart handy. These provide a visual reference to the appearance of the typefaces, as well as the character codes you'll need to know.

CorelDRAW's ability as a font editor opens up new avenues for your creativity. We hope you find the tools useful. Please feel free to drop us a line and tell us how you're using them. We'd also appreciate hearing of any suggestions for improvement or of any difficulties you have. At COREL, we're committed to the production of high-quality, user-friendly products. Your feedback can help us to make them even better.

WFN Typefaces supplied with CorelDRAW

COREL Typeface Name

*Trademarked equivalent typeface

AARDVARK BOLD	Achen Bold (Letraset™)
ARABIA	Arnold Böcklin
AVALON	Avant Garde (ITC™)
(Normal, Bold, Italic, Bold-Italic)	
BAHAMAS	Bauhaus (ITC™)
(Normal, Bold)	
BAHAMAS LIGHT	Bauhaus Light (ITC™)
BAHAMAS HEAVY	Bauhaus Heavy (ITC™)
BANFF	Brush Script
BANGKOK	Benguiat (ITC™)
(Normal, Bold)	
BODNOFF	Bodoni Poster
BROOKLYN	Bookman (ITC™)
(Normal, Bold, Italic, Bold-Italic)	
CASABLANCA	Caslon
(Normal, Bold, Italic, Bold-Italic)	
CASPER OPENFACE	Caslon OpenFace
CENTURION OLD	Century Old Style
(Normal, Bold, Italic)	
COTTAGE	Cottonwood (Adobe™)
CUPERTINO	Cooper Black
(Normal, Italic)	
DAWN CASTLE	Dom Casual
(Normal, Bold)	
DIXIELAND	Zapf Dingbats (ITC™)
ERIE	Eras (ITC™)
(Normal, Bold)	
ERIE BLACK	Eras Black (ITC™)
(Normal, Bold)	
ERIE LIGHT	Eras Light (ITC™)
(Normal, Bold)	
FRANCE	Friz Quadrata (ITC™)
(Normal, Bold)	
FRANKENSTEIN	Fette Fraktur (ITC™)
FRANKFURT GOTHIC	Franklin Gothic (ITC™)
(Normal, Bold, Italic, Bold-Italic)	
FRANKFURT GOTHIC HEAVY	Franklin Gothic Heavy (ITC™)
(Normal, Italic)	
FREEPORT	Freestyle Script (Letraset™)
FUJIYAMA CONDENSED	Futura Condensed (FTNSA™)
(Normal, Bold, Italic, Bold-Italic)	
FUJIYAMA CONDENSED EXTRA BOLD	Futura Condensed Extra Bold (FTNSA™)
(Normal, Italic)	
FUJIYAMA CONDENSED LIGHT	Futura Condensed Light (FTNSA™)
(Normal, Italic)	
FUJI2	Futura 2 (FTNSA™)
(Normal, Italic)	
GATINEAU	Garamond (ITC™)
(Normal, Bold, Italic, Bold-Italic)	
GEOGRAPHIC	Carta (Adobe™)
GREEK/MATH SYMBOLS	Symbols
HOMEWARD BOUND	Hobo
IRELAND	Ironwood (Adobe™)
JUPITER	Juniper (Adobe™)
KOALA	Kaufmann (Kingsley/ATF™)
(Normal, Bold)	

*All product and brand names are trademarks of their respective companies.

COREL Typeface Name***Trademarked equivalent typeface**

LINCOLNLinotext (Linotype™)
LINUS.....	.Linoscript (Linotype™)
MEMORANDUM	American Typewriter (ITC™)
(Normal, Bold)	
MONOSPACED	Letter Gothic
(Normal, Bold, Italic, Bold-Italic)	
MOTORMachine (ITC™)
MUSICAL	Sonata (Adobe™)
MYSTICAL.....	Mistral (M. Olive™)
NEBRASKA	New Baskerville (ITC™)
(Normal, Bold, Italic, Bold-Italic)	
NEW BRUNSWICK	New Century Schoolbook
(Normal, Bold, Italic, Bold-Italic)	
OTTAWAOptima (Linotype™)
(Normal, Bold, Italic, Bold-Italic)	
PALM SPRINGS.....	Palatino (Linotype™)
(Normal, Bold, Italic, Bold-Italic)	
PARADISE	Park Avenue (ATF Type™)
PARAGON	Parisian (Kingsley/ATF™)
PENGUIN.....	Peignot (Linotype™)
(Normal, Bold)	
PENGUIN LIGHT	Peignot Light (Linotype™)
POSSE	Ponderosa (Adobe™)
PRESIDENT.....	Present Script (Linotype™)
PROSE ANTIQUE	Post Antiqua (H. Berthold AG™)
(Normal, Bold)	
RENFREW	Revue (Letraset™)
SOUTHERNSouvenir (ITC™)
(Normal, Bold, Italic, Bold-Italic)	
STAMP	Stencil
SWITZERLAND	Helvetica (Linotype™)
(Normal, Bold, Italic, Bold-Italic)	
SWITZERLAND BLACK.....	Helvetica Black (Linotype™)
(Normal, Italic)	
SWITZERLAND LIGHT.....	Helvetica Light (Linotype™)
(Normal, Italic)	
SWITZERLAND NARROW.....	Helvetica Narrow (Linotype™)
(Normal, Bold, Italic, Bold-Italic)	
SWZ COND	Helv. Cond. (Linotype™)
(Normal, Bold, Italic, Bold-Italic)	
SWZ COND BLK	Helv. Cond. Blk. (Linotype™)
(Normal, Italic)	
SWZ COND LGT	Helv. Cond. Lgt. (Linotype™)
(Normal, Italic)	
SWZ INSERAT	Helv. Inserat (Linotype™)
TECHNICAL	Tekton (Adobe™)
(Normal, Italic)	
TIMPANI	Tiffany (ITC™)
(Normal, Bold, Italic, Bold-Italic)	
TIMPANI HEAVY	Tiffany Heavy (ITC™)
(Bold, Bold-Italic)	
TORONTO	Times (Linotype™)
(Normal, Bold, Italic, Bold-Italic)	
UMBRELLA.....	Umbra (Kingsley/ATF™)
UNICORN.....	University Roman (Letraset™)
USA BLACK	Univers Black (Linotype™)
(Normal, Italic)	
USA LIGHT	Univers Light (Linotype™)
(Normal, Italic)	
VOGUE	VAG Rounded
(Normal, Bold)	
ZURICH CALLIGRAPHIC	Zapf Chancery (ITC™)

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Section 1

WFN BOSS 2.00: Introduction

The WFN BOSS program is a versatile Windows application that will convert outline font data from a variety of manufacturers into a format usable by CorelDRAW. This lets you choose from *thousands* of new typefaces to add to the over 150 currently packaged with CorelDRAW. WFN BOSS and CorelDRAW's new Symbol & Typeface Export filter essentially turn CorelDRAW into a font editor, capable of altering COREL's own typeface and those in use by many other software applications.

With this release of WFN BOSS, we have also added the capability of converting CorelDRAW typefaces to Adobe Type 1 format. This feature allows you to create PostScript downloadable fonts of any CorelDRAW typeface! These can then be used in a variety of applications such as Ventura Publisher, PageMaker and the Adobe Type Manager. The Adobe Type Manager permits Adobe typefaces to be used in numerous applications such as Word for Windows, Excel, and others.

Another interesting WFN BOSS capability allows you to send any CorelDRAW typeface into Publisher's Type Foundry, where you may then customize it and add kerning data. Such customized typefaces can then be converted back into COREL's font format, or may be used in Type Foundry to create both screen and printer fonts for direct use in applications such as Ventura Publisher and PageMaker.

Once WFN BOSS is installed (done automatically when installing CorelDRAW), you must first run Windows and then click on the WFN BOSS icon in the COREL program group. The program may then be operated using either the mouse or the keyboard. After selecting a typeface conversion format, you are presented with a list of typefaces available for conversion in the current directory. Selecting one of these and clicking on *Convert* begins the process and the conversion runs automatically. The resulting CorelDRAW WFN typeface file is placed on the system in your CorelDRAW subdirectory, unless otherwise specified.

Each of the following formats (except Substitution) is an outline font description which can be translated into the CorelDRAW native font format (.WFN). We have tried very hard to provide you a utility that will give superb performance on these font conversions. If you experience difficulty with any of them, please let us know so that we can make it even better!

The formats available for conversion to WFN typefaces include:

- Adobe Type 1:
 - a) Most Type 1 .PFB/.AFM font pairs
 - b) WFN BOSS can also be used to convert COREL's .WFN fonts to the Type 1 format. This allows you to produce downloadable PostScript fonts for use with variety of other applications. Files produced are .PFB, .AFM and .PFM
- Agfa Compugraphic:
 - a) Paired .FF fonts for the Type Director system
 - b) .FF fonts purchased directly from Agfa Compugraphic in the Curvilinear Typeface Library
- Bitstream:
 - .TDF, .BCO & .BEZ format files
- DigiFont:
 - .DFI files
- Readable PostScript:
 - a) Fonts made using Fontographer: includes Casady & Greene, Image Club, Treacyfaces, and others (.PFA/.AFM pairs)
 - b) Any fonts made using the IKARUS font system: includes fonts supplied by The Font Company, the licenced distributor of URW fonts (.PFA/.AFM pairs)
 - c) Fonts made using the Bitstream FontWare system
- Z-Soft Type Foundry:
 - a) .OTL files. These are created through Type Foundry's Outline Editor portion of the program
 - b) WFN BOSS can also be used to convert COREL's .WFN fonts to the .OTL format. Type Foundry's OTL Editor may then be employed to edit and add kerning information to the font. Fonts can then be brought back into CorelDRAW or used in other applications

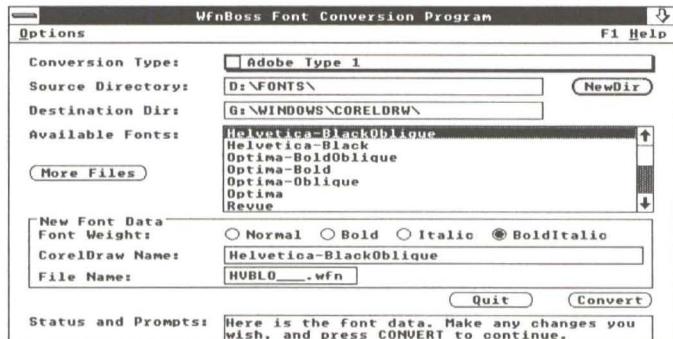
A specialized final type is:

- Substitution:
 - This conversion allows the user to access printer-resident PostScript fonts

Operation

The WFN BOSS utility is installed automatically when installing CorelDRAW. To use it, start up Windows 3.0 and double-click on the WFNBoss icon in the COREL program group.

A "fill-in-the-blanks" type of screen will appear, as shown below. You should run through the various fields from top to bottom and you can jump between these fields using the TAB and Shift-TAB keys. For multiple-choice fields, the SPACE bar is used to activate the current field.



The topmost field shows the typeface *Conversion Type*. To select the conversion type you want, either press the SPACE bar repeatedly or click on the conversion name with the mouse. The utility will then cycle through the list of available conversions.

The next field is the *Source Directory* that contains the input font data. If you are converting font files from your floppy disk drive, this should read either A:\ or B:. You may change this manually, or you may click on the button immediately to the right of it to use a dialog box for selection. If you use the dialog box, a list of available

matching files will appear in the box. You cannot select them at this point, the list is just there to let you know whether or not the current directory contains some of the specified font files. When you have located the desired directory, click on *OK*.

The next field down displays the *Destination Directory* that will receive the converted files. This is usually the directory that used to store CorelDRAW. Using the AutoInstall feature (see *Options* section) forces it to be that directory. There is very little reason to change this directory.

Once you have located a *Source Directory* that contains a convertible file, you will see the *Available Fonts* field display all fonts available for conversion. Scroll through the list and select one of these. Note however that the *Available Fonts* field can only display a maximum of 32 font files at a time. If there are more than this in the current *Source Directory*, the *More Files* box to the left of the *Available Fonts* field becomes active. You can click on this to see the next block of 32 files. If you have still more files, click on *More Files* repeatedly until you've seen full the contents of the current directory. Should you then wish to convert a file from one of the previous blocks of 32, click on the *NewDir* box and open the current *Source* directory again.

When you select a font file, the *New Font Data* field will fill in. This field permits you to specify three aspects of the file to be converted, namely:

- *Font Weight*
- *CorelDraw Name*
- *File Name*

The WFN BOSS program creates **suggestions** for these, based on available information in the font, but you can change any or all of these entries. You will rarely want to change the *Font Weight*. The *CorelDraw Name* is the name that will appear in the font selection box when running the CorelDRAW program, and you can enter any name you wish here. If you chose to merge fonts (see *Merging Fonts* section) they should all have the same *CorelDraw Name*. The third field is the *File Name* and needs to be changed only when merging fonts.

When these three fields have been specified, or if the WFN BOSS suggestions are acceptable, click on the *Convert* button to begin the conversion. Alternatively, you may go back and select another font, another conversion type, or *Quit* to leave the utility.

As the conversion takes place, the *Status and Prompts* field at the bottom of the dialog box will indicate its progress.

When the conversion is complete, the font will be saved in the *Destination Directory* and the font list is updated.

General

The resulting converted font files (.WFN) will be about 10-25 kilobytes long. If the character set is missing many characters, it will probably end up in the 10-15 kilobyte range. On the other hand, if it is a full character set, it will probably be in the 15-25K range. If you merge several type style weights into one font file, these numbers will double, triple or even quadruple.

Also note that if you operate the WFN BOSS utility while CorelDRAW is running, the new fonts will not be available in that session of CorelDRAW. You must exit CorelDRAW and restart it in order to use the new fonts, since the program only checks the available font list when it first starts up.

Font Names

There are several places in WFN BOSS where the fonts are named and there are four names associated with each font:

- 1) The name that appears in the WFN BOSS *Available Fonts* box is extracted from the available font information on the disk. Its purpose is to inform you of the contents of the source font disk file.
- 2) The *CorelDraw Name* is used in CorelDRAW during font selection. You may choose any name you wish here, provided it is limited to 25 characters **with no spaces**. You don't need to indicate the font's weight in this name, since that's handled in another way. You may enter trademark names in this field if you wish, since this data is only used during the operation of CorelDRAW.
- 3) The *New Font File Name* is important for the following reason. When you save a CorelDRAW illustration containing text, the font in use is stored within the illustration file using the *Font File Name*. For instance, if you have Times-Roman text in an illustration, the string "TORONTO.WFN" (the CorelDRAW version of Times-Roman) is stored within the document file. If you wish to send this file to someone else using CorelDRAW, that person must also have TORONTO.WFN available on their system. ***The ability to share files is the main reason to use the font file name suggested by WFN BOSS.*** In this way, all WFN BOSS user's font lists can be compatible (an exception for DigiFonts exists here, and is described in the *Conversions* section).
- 4) The fourth name is the PostScript invocation name. This is the name the computer sends to a PostScript printer to request the font. You rarely need to know this, except in the "Substitution" conversion (see the *Conversions* section). These names **never** have spaces in them.

Merging Typestyles

The WFN BOSS utility converts one *typestyle* (ie/ Normal, Italic, Bold or Bold-Italic) of one *typeface* (ie/ Swiss) at a time. If you happen to have all four of these styles available for a particular typeface, then these should be converted in four separate steps. For each of the four conversions, the *CorelDraw Name* and *File Name* in the *New Font Data* box would be the same, only the *Font Weight* would change.

The WFN BOSS can store all four *typestyles* of a *typeface* in a single file. The advantage of doing this is that the CorelDRAW program will make the four typestyles available when choosing that particular typeface during font selection. The weight selection buttons (*Normal, Italic, Bold and Bold-Italic*) will be enabled, allowing you to choose the desired style. In Bitstream font conversions, this 4-in-1 merging is done automatically. For DigiFonts however, the family information is not available to WFN BOSS. These should be handled as described in the DigiFonts section under *Conversions*.

Other cases that require special treatment are the intermediate *type family* weights, typically incorporating names such as "extra-light", "light", "demi", "condensed", "condensed-bold" and other combinations. Since CorelDRAW only has four weight classifications (*Normal, Italic, Bold and Bold-Italic*) per typeface name, you must examine the entire family collection available to you and group the members into appropriate clusters of four. Each cluster of four must then be stored under a unique *CorelDraw Name* and *.WFN File Name*, with the members of each cluster differentiated by the *Font Weight* you choose.

For example, if you had these ten members of the Swiss family available: Swiss Extra Light, Swiss Light, Swiss Normal, Swiss Italic, Swiss Bold, Swiss Bold-Italic, Swiss Condensed, Swiss Condensed Bold, Swiss Black and Swiss Black-Italic, they in turn could be sorted into the following four *CorelDRAW Name* groups:

<i>Possible CorelDRAW Name</i>	<i>Normal</i>	<i>Italic</i>	<i>Bold</i>	<i>Bold-Italic</i>
SwissLight	Extra-Light		Light	
Swiss	Normal	Italic	Bold	Bold-Italic
SwissCond	Condensed		Cond-Bold	
SwissBlack			Black	Black-Italic

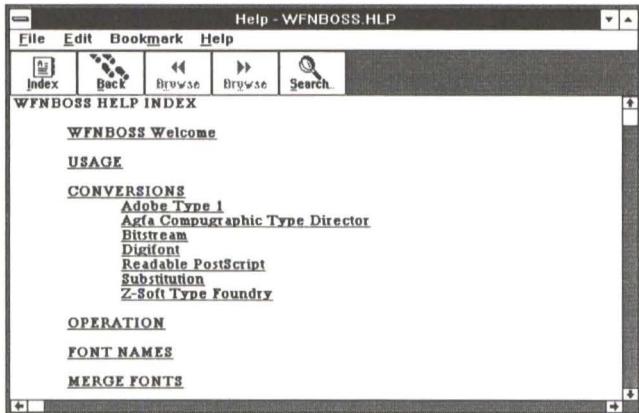
There is a *Convert All* mode under the WFN BOSS *Options* which will convert all the available fonts in the selected directory. If this option is used with any conversion type **other than** Bitstream, you will end up putting each font into a different file. Since this is probably not what you want, we strongly suggest that you control the font conversion by doing it one font at a time and choosing the names of the .WFN files to group the fonts together, as in the above example.

As mentioned above, the .WFN *File Name* is used when your artwork is stored on disk, so try to use the .WFN *File Name* that is suggested by WFN BOSS. **This allows you to exchange your artwork files with other people who have also converted the same fonts.**

Note that some members of certain type families have long names which may exceed 25 characters. This can be a problem if you're converting more than one member from such a family. The reason is that WFN BOSS will only look at the first 25 characters and ignore the rest. It then bases its suggested *CorelDRAW Name* on those 25 characters. If the differences in the original font names occur only *after* 25 characters, it will assign the **same** *CorelDRAW Name* to each of the converted fonts. In other words, it will overwrite the previous one(s) that it has assigned that same name. If you're converting such fonts, you can easily get around this by **changing** the suggested *CorelDRAW Name* to a unique one for each conversion you do.

On-screen Help

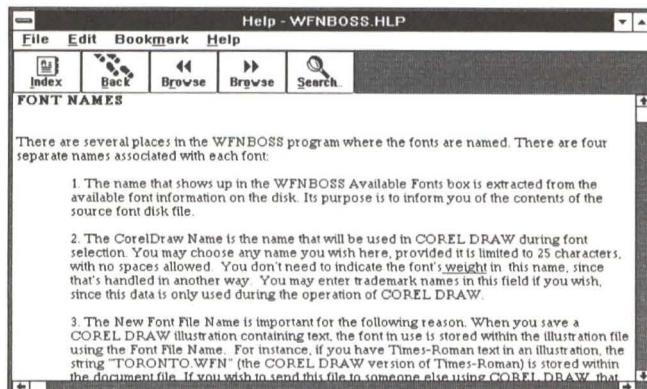
WFN BOSS incorporates on-screen Help via the Windows Help system. It can be accessed by clicking on *Help* at the upper right corner of the main menu, or by pressing F1. The *Help* file contains much of the information presented in the WFN BOSS section of this manual. Click on *Index* in the Help main menu to display a list of the topics covered.



After clicking on a topic in the *Index*, the window displays information on that topic.

You will notice that some words or phrases in the text are underlined. These items are referred to as *hypertext*, and if you click on any of these, further information on that item will be provided.

Click on the *Browse* and *Back* options in the menu bar to work your way through the menu on a page-by-page basis, or click on Index to choose an item from another part of the Help file. *Browse* (with right arrows) advances you through the various topics in the order shown in the Index. Similarly, *Browse* (with left arrows) moves you back through the topics one page at a time. *Back* allows you to view the last page you looked at, regardless of its position in the Help file. Use *Quit* under the FILE menu to leave the on-screen Help.



Program Options



The following options are available by clicking on *Options* in the upper left corner of the main WFN BOSS menu.

Font File Info...

This option allows you to examine and change some aspects of .WFN files. Click on *Font File Info* and select the directory containing the desired .WFN file using the *Select Font File* box. Click on the name in the list you wish to examine and you will be shown a list of the constituents of that .WFN file. You can then change the default character and the PostScript invocation name and press *OK*, or *Cancel* to make no changes. Only one font may be changed at a time.

AutoInstall

With *AutoInstall* enabled, the converted files are directed to your CorelDRAW directory, or the Fonts Directory specified in the [CDrawConfig] portion of your CORELDRW.INI file. If you disable *AutoInstall*, you may direct the fonts to any directory you wish. The converted file will not be stored in your CORELDRW.INI file, but will be remembered by WFN BOSS in its own WFNBOSS.INI file.

Compress Fonts

This option is only in effect for the Readable PostScript conversion. If selected, *Compress Fonts* directs the conversion to produce the most compact version of the font. This in turn, speeds up printing and display times, while retaining the quality of the original font down to 1 part in 500 precision. For technical reasons, DigiFonts and Agfa/Compugraphics fonts are always compressed, and Adobe Type 1, Bitstream and Type Foundry are never compressed.

Whenever you reinstall CorelDRAW, you will lose the information in the current CORELDRW.INI file. This information includes the font list.

Reinstall Fonts!

If you must do this, then after the reinstallation is complete, check that CorelDRAW operates properly. If it does, then run the WFN BOSS program and in the menu selection under *Options*, select *Reinstall Fonts*. This will copy the complete list of all font conversions that you have performed to date from the WFNBOSS.INI file into the CORELDRW.INI file.

NOTE: during the transfer, the program checks for the existence of each .WFN file and any that are not found are not transferred.

If, for any reason, you need to maintain these lists manually, you may need the following information. The list that CorelDRAW uses is in the CORELDRW.INI file, located in your CorelDRAW directory. The CORELDRW.INI contains a section called [CorelDrwFonts] and each line entry here looks something like this:

FontName=15 filename.wfn 0

The FontName is the name that will appear in the CorelDRAW font selection box. The first number represents the **sum** of available weights in that font file, where 1=normal, 2:bold, 4=italic and 8=bold-italic (if all are available, then $1+2+4+8=15$). The filename.wfn is the exact WFN typeface file name. The number after this indicates whether there is a matching PostScript font available (0 = typeface is not resident, 1 = typeface is resident in all PostScript printers, 3 = typeface is resident in recent PostScript printers).

WFN BOSS keeps its own font list as well, in the file named WFNBOSS.INI. This can be found in your CorelDRAW directory. The format is identical to that in the CORELDRW.INI file. Each conversion you make adds a new line to the WFNBOSS.INI. If you have certain entries in there that you no longer need, you can use the Windows Notepad to delete them.

There are several other bits of information stored in the WFNBOSS.INI file, mostly about the configuration of the utility. If, for some reason, WFN BOSS cannot locate its WFNBOSS.INI file, it creates a new one.

The only external file required by WFN BOSS is the WFNBOSS.CSD file, which is copied to your CorelDRAW directory during the WFN BOSS installation.

Convert All!

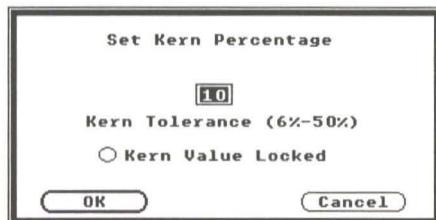
The *Convert All* feature simply converts all the fonts on the font list. In many cases, the warnings you would get by doing the conversion manually will be suppressed. However, you may still be prompted for any files that are missing.

In most cases when using this option (except Bitstream), WFN BOSS will put each font in a separate file, which may not be what you want. For that reason, we recommend that you do not use the *Convert All* feature, but instead, convert them one at a time (see *Merging Fonts* section).

Set Kern...

This option allows you to set a percentage tolerance for finding kerning pairs. *For most typefaces, this parameter does not have to be adjusted.* The value usually defaults to what the program determines to be correct, based on the font characteristics contained in the font files. However, there are cases where the program may experience difficulties with the available kerning data. Certain Type Foundry and Agfa/Compugraphic fonts fall into this category, and it is only for these two conversion types that this option is active.

If you have problems converting any such fonts (usually indicated by WFN BOSS hanging or terminating on the kerning section of the program), then re-open WFN BOSS and try altering this parameter. Re-select the particular font file that would not convert properly. Select *Set Kern* from the *Options* list and the following dialog box appears:



A numeric value between 6 and 50 may be specified as the *Kern Tolerance* percentage. The higher this value is set, the fewer the number of kerning pairs within the selected font that will be recognized by the program. To determine whether or not you will be able to successfully convert your troublesome file, set this value to 50 (the maximum) and run the conversion. If the conversion is successful, you may wish to repeat the procedure and choose a lower value, such as 40. If that works, try it again with an even lower value. By repeating this until the conversion fails, you can determine the lowest permissible *Kern Tolerance* for that font file.

Setting a kerning tolerance above the default value in this fashion does not necessarily mean that the quality of the kerning will suffer. Instead, it is a way that allows you to discard meaningless kerning pairs.

Note that if you select a font and set a *Kern Tolerance* and then select another font, the *Kern Tolerance* will be reset to using default values. If you wish to keep the value you've set, click on the *Lock Kern Value* button. The value will now be used for whatever font you select. To unlock the value, click on the Lock button again.

Conversions

This section provides specific information concerning each of the typeface formats supported by the WFN BOSS utility.

Adobe Type 1 Typefaces

The Adobe Type 1 typefaces may be **both** imported and exported through WFN BOSS. They can be converted to WFN format for use within CorelDRAW, and now, CorelDRAW WFN typefaces can also be converted to Adobe Type 1 format for use in numerous other applications.

Adobe Type 1 to WFN Format

Adobe supplies the industry with fonts in a special "Type 1" downloadable format. These .PFB fonts can be converted by the WFN BOSS utility and the conversions are fairly quick.

Some Type 1 fonts are stored twice in one font file. The two versions represent two carefully-crafted alternatives, one which renders well at small point sizes and the other which is used at large sizes. In these cases, you will be informed that there is more than one version of the font. Simply select the first or second version, as desired. When converting an oblique (italic) font, you must answer "NO" to the prompt or an error message will be issued. If you receive this prompt more than once, answer "NO" to the second and third prompts. Whenever you receive this prompt, check the resultant font in CorelDRAW before using it.

It is impossible to guarantee successful conversions of these Type 1 fonts because of the storage format used. If you have a problem with a particular font, please let us know. Note that the .PFD versions of these fonts are not convertible.

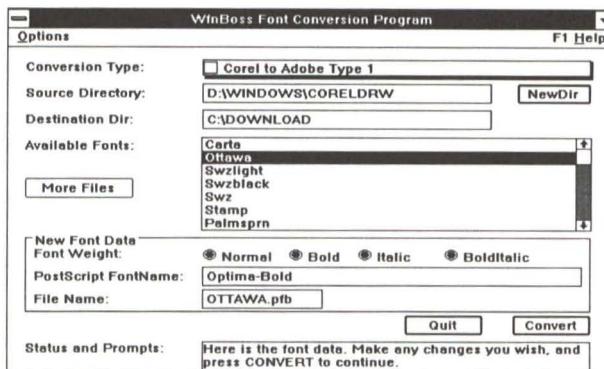
WFN Format to Adobe Type 1

As mentioned previously, WFN BOSS can also produce Adobe Type 1 files from WFN typefaces. This is fairly

significant, given that CorelDRAW has also been enhanced to allow editing of any WFN typeface (this capability is described in Section 2 of this manual). Coupled with WFN BOSS's WFN-to-Type 1 conversion, you can now produce custom typefaces in CorelDRAW for use in a variety of other software applications. A few possibilities include:

- Production of downloadable PostScript typefaces for any application capable of using them (Ventura Publisher, PageMaker, etc.)
- Custom typefaces for use by the Adobe Type Manager. This program gives you the ability to create typefaces that can be used in Windows applications such as Word and Excel

When you choose a WFN font for this conversion, WFN BOSS will produce matching .PFB, .AFM and .PFM files. The main screen appears as follows:



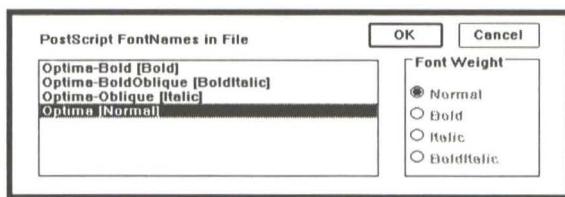
For the most part, this looks and operates in the same way as it does when converting other typeface formats into the WFN format. There are however, a few differences.

To convert .WFN files to Adobe Type 1, click through the available *Conversion Types* until "Corel to Adobe Type 1" appears. The *Source Directory* for your .WFN files is usually `WINDOWS\CORELDRW`. You must also specify a *Destination Directory*. Depending on your specific applications and setup, this might be the one you use to store your downloadable fonts or your Windows directory.

Select the file you wish to convert from the list of *Available Fonts*. Once a selection is made, those *Font Weight* buttons corresponding to the typestyles available in the .WFN font become active (ie/ Normal, Bold, etc.).

The *PostScript Font Name* in the *New Font Data* field suggests a name that is used by the printer. If you are converting an existing WFN typeface, there is very little reason to change this. If the typeface is a custom one you created in CorelDRAW, you can specify any name you want here. The *File Name* box shows the root name that will be assigned to the converted Type 1 files. Each of the .PFB, .AFM and .PFM files will have this as their root name. You can change this read whatever you want, or leave the suggested name. Note that only the .PFB name will appear in this box, however all three types will be produced when the conversion proceeds.

Click on *Convert* or double-click on the desired typestyle to proceed, and another dialog box appears on screen.



This box displays the typestyles available in the file you have chosen and allows you to specify which one to convert.

When you select one, the *Typestyle* button to the right becomes active, confirming your choice. When there is more than one available, they must be converted one at a time. Click on *OK* to begin the conversion. Note that if you click on *OK* without selecting a typestyle, the first font on the list is converted by default.

There are two sources of Agfa Compugraphic typefaces. The Type Director series of typefaces are available from Agfa Compugraphic, Hewlett-Packard and several dealer/distribution channels. These are low-priced, convenient, and extremely high-quality fonts. The Type Director program also allows you to convert these fonts for use with many other PC programs, including Ventura, PageMaker, Windows, Word and WordPerfect.

Agfa Compugraphic

Another source of these typefaces is directly from Agfa Compugraphics, through the Curvilinear Typeface Library. This program gives you access to some 1200 Compugraphic professional typefaces.

Either of these formats can be converted by WFN BOSS. The Agfa Compugraphic character set is very rich, and so almost all the available characters are present. Notable exceptions are the "greater than", "less than" and "caret" symbols, but you can always find equivalents in one of the COREL typefaces and substitute a particular character using the Node Edit mode in CorelDRAW.

The conversion uses matched pairs of .FF files, directly from the source floppy disks.

These typefaces are all stored in line and arc format. Since CorelDRAW requires data in the Bézier format, these conversions may require some time. You can monitor the progress of the conversion in the *Status and Prompts* box. Most conversions require less than 3 minutes on an 80386-based computer.

WFN BOSS can read and convert files of the normal FontWare distribution format (ie/ the original font files on the floppy disks). To do a conversion, WFN BOSS requires the .TDF, .BCO and .BEZ files of that typeface. These may reside on different floppy disks and you will be prompted as they are required. In addition, the file WFNBOSS.CSD must be copied into your CorelDRAW directory. This is normally done during WFN BOSS installation.

Bitstream

If for some reason you cannot access the .TDF, .BCO or .BEZ files, you may convert FontWare PostScript downloadable fonts through the "Readable PostScript" conversion. Use the .PFA files that were produced by FontWare. However, unless

DigiFont

you have a corresponding .AFM file, this method will not work. Note also that the Bitstream Symbol typefaces do **not** convert successfully.

Bitstream typefaces are stored as Bézier curves, and are converted quickly. The quality of the resulting characters is excellent.

The DigiFont collection is available in a single purchase unit of over 250 typefaces, or individual disks of 8 styles per disk, in .DFI files.

The DigiFont collection contains virtually no information concerning font families, so it's up to you to merge members of a family into a single .WFN file, as detailed in the *Merging Fonts* section. For example, the four "Rico" typestyles are stored in the DigiFont collection as fonts X1001 through X1004. If you convert the Normal (or Roman) face (X1001) first, WFN BOSS will suggest the file name X1001.WFN. You might as well use this. You can change the *CorelDraw Name* to anything you want. Set the *Font Weight* to *Normal* and convert the font. When you proceed to convert the Bold font, WFN BOSS will suggest X1002.WFN for the file name. Change it to X1001.WFN so that the Bold style will be merged in with its Normal form. Remove the "Bold" from the *CorelDraw Name*. Set the *Font Weight* to *Bold* and convert the font. For the Italic and Bold-Italic styles, change them to use the X1001.WFN file as well, then set the appropriate *Font Weight* and convert them. In this way, all four typestyles will be put into a single .WFN file. This is desireable since you can then access all of them by only specifying one typeface name in CorelDRAW's Text Window.

The DigiFonts are all recorded as lines and circular arcs. Since CorelDRAW requires Bézier forms, it may take a few minutes to convert a file. At the present time, kerning information is provided by a product called "Digi-kern", available separately. Contact DigiFont for updates on that situation and on any new typeface availability.

The DigiFonts do not include accented characters (accents are separate characters) or all the typographical symbols accessible by CorelDRAW, but characters in the low-ASCII set are usually available.

There are groups of PostScript fonts (.PFA) which follow certain defined design rules and WFN BOSS can read these formats directly. This conversion also requires an associated .AFM file, which contains the character sizes and kerning data.

Readable PostScript Typefaces

The first group of files shown in the *Available Fonts* field cover those synthesized by Fontographer (Version 2 and Version 3, hinted and unhinted), a Macintosh font editor written by ALTSYS. Most of the Casady & Greene and Image Club fonts use this format. The second group of files shown cover those synthesized by IKARUS, a minicomputer font editor. This format is used by The Font Company in its URW fonts and by Bitstream FontWare when it generates a PostScript downloadable font. In all cases, we attempt to match the given font character set to the CorelDRAW character set. However, in some cases there is insufficient information supplied in the font and while this usually does not affect the low-ASCII characters, it may position the accented characters incorrectly.

These files contain binary-encoded Bézier information and therefore convert rather quickly. However, some of these fonts have been converted from other formats using a crude conversion method. If you determine that the converted font has an unnecessarily large number of points, you may use the *Compress Fonts* option in the WFN BOSS menu.

If you cannot convert a PostScript typeface by any of the other available conversions, WFN BOSS includes a *Substitution* method as a last resort. This method allows you to use one of your existing screen fonts (called a "Visual Font" in WFN BOSS) to position another font in the printer. By specifying *Substitution*, WFN BOSS allows you to do a conversion for any font for which you have an associated .AFM file. That file contains all the width and kerning information required to place and print using that particular font. It may be that the outline data for that font is either unavailable or unreadable, and therefore cannot be displayed on the screen. So WFN BOSS will allow you to substitute the

Substitution (PostScript Only)

character shapes on-screen from any other .WFN font, while still using the character widths and kerning information from the specified .AFM file.

In other words, while you are in CorelDRAW, the version that you see on-screen will **NOT** match what is printed out to the PostScript printer. The on-screen font is your substituted font, and allows you to correctly place the desired text into your drawing. However, when you print the drawing, the original PostScript font you wanted (which is downloaded into the printer) will be used. In some cases, this is an acceptable solution. At any rate, it's the best WFN BOSS can do with only this information file available. Note that if you print to non-PostScript printers, or if you "Convert to Curves", CorelDRAW will use the screen version of the font, which may not be what you had in mind.

The DigiFont collection contains over 250 fonts, many which approximate industry-standard fonts. These can often be used as the base for a *Substitution* conversion to give screen approximations of the printable font. Of course, the actual font must be downloaded to the printer and made resident before printing with it.

Z-Soft Type Foundry

Just as is the case with Adobe Type 1, WFN BOSS allows you to run conversions in **both** directions with Z-Soft's .OTL format. You can convert (import) .OTL typefaces to COREL's .WFN typefaces, but you can also convert (export) any .WFN face to the .OTL format. Since this allows you to bring a .WFN file into the Type Foundry program, you can then edit outlines and alter the kerning information of that typeface. You can then bring it back for use in CorelDRAW. It also allows you to use CorelDRAW and .WFN fonts to create both screen and printer fonts for other program applications such as PageMaker and Ventura Publisher.

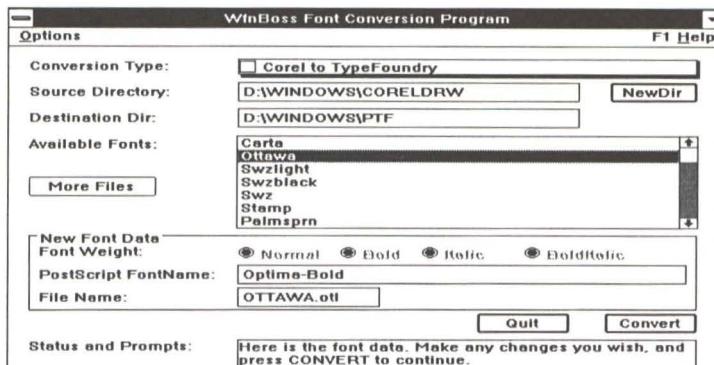
Z-Soft's OTL fonts to CorelDRAW's WFN fonts

The Z-Soft Type Foundry program allows you to create and edit your own fonts. The program actually comes in two halves: the outline editor and the bitmap editor. WFN BOSS only uses the outline editor (.OTL files).

Any .OTL file can be converted to CorelDRAW's .WFN format. Since the character set is completely programmable, WFN BOSS does not remap any characters. Since the CorelDRAW character set is so close to the Windows ANSI character set, this is usually not a problem. These conversions proceed fairly quickly. Note also that CorelDRAW has an upper limit of 300 data points per character and some auto-traced .OTL font characters may exceed this limit. In such cases, part of the character may be omitted.

CorelDRAW's WFN fonts to Z-Soft's OTL fonts

To convert .WFN files to .OTL format, click through the available *Conversion Types* until the "Corel to TypeFoundry" entry appears, as shown below.

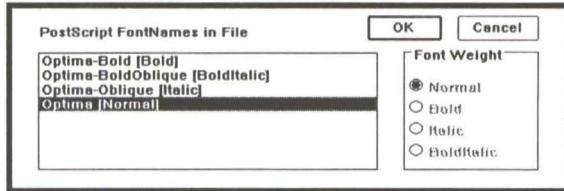


The *Source Directory* for your .WFN files is usually `WINDOWS\CORELDRW`. You must also specify a *Destination Directory*, such as the one used for the Type Foundry program.

Select the file you wish to convert from the list of *Available Fonts*. Once a selection is made, those *Font Weight* buttons corresponding to the typestyles available in the .WFN font become active (ie/ Normal, Bold, etc.).

The *PostScript Font Name* in the *New Font Data* field suggests a name that is used by the printer. If you are converting an existing WFN typeface, there is very little reason to change this. If the typeface is a custom one you created in CorelDRAW, you can specify any name you want here. The *File Name* box shows the name that will be assigned to the converted .OTL file. You can change this to read whatever you want, or leave the suggested name.

Click on *Convert* or double-click on the desired typestyle to proceed, and another dialog box appears on screen.



This box displays the typestyles available in the file you have chosen and allows you to specify which one to convert. When you select one, the *Typestyle* button to the right becomes active, confirming your choice. When there is more than one available, they must be converted one at a time. Click on *OK* to begin the conversion. Note that if you click on *OK* without selecting a typestyle, the first font on the list is converted by default.

Vendor Contacts

For further information on the available typeface libraries compatible with the WFN BOSS conversion utility, contact the following vendors:

Vendor	Product Name	Format	# of Outlines	Phone Number
<i>Adobe</i>	Type Library	Adobe Type 1	450	(415) 961-4000 or 800-833-6687
<i>Agfa Compugraphic</i>	Curvilinear Type Library	Agfa Compugraphic Type Director	1700	(508) 658-5600 x2107 or 800-873-3668
<i>Bitstream</i>	Fontware	Bitstream	1007	(617) 497-6222 or 800-522-3668
<i>Casady & Greene</i>	Fluent Laser Fonts	Readable Postscript	83	(408) 624-8716 or 800-331-4321
<i>DigiFonts</i>	Digi-Duit	DigiFont	272	(303) 526-9435 or 800-242-5665
<i>HP/ Agfa Compugraphic</i>	Type Director	Agfa Compugraphic Type Director	53	800-538-8787 (HP) 800-873-3668 (Agfa)
<i>Image Club</i>	Postscript Typeface Library	Readable Postscript	600	(403) 262-8008 or 800-661-9410
<i>Monotype</i>	Library of PostScript	Adobe Type 1	400	312-855-1440
<i>The Font Company</i>	URW Type Library	Readable Postscript	1600	(602) 996-6606 or 800-422-3668
<i>Treacyfaces</i>	Treacyfaces	Readable Postscript	39	(215) 896-0860

Total number of typefaces: Over 6200!!

Font Editor Programs (used to create your own custom typefaces)

Z-Soft Type Foundry: (404) 428-0008
for the IBM-PC

Fontographer (Versions 2 and 3): (214) 424-4888
for the MAC



Section 2

Corel Symbol & Typeface Export: Introduction

With this release of CorelDRAW, we introduce the capability of creating your own WFN typefaces and symbol fonts, via the Corel Symbol & Typeface Export filter. Unlike the other filters available in CorelDRAW, this one does **not** convert your image to a graphic file format. Instead, it allows you to directly incorporate your graphic into a WFN typeface, CorelDRAW's native type format. This in turn, *allows you to summon and use your graphic as a text character within CorelDRAW*, either as part of an existing typeface, or as a member of a fully-custom typeface you can create!

You can now permanently customize *any* character in *any* of the over 150 typestyles supplied with CorelDRAW! Or you can create totally unique typefaces, such as your own symbol sets. The new symbol libraries supplied with this version of CorelDRAW were created in precisely this manner. The original images were all created either directly in CorelDRAW or based on hand-drawn sketches. The sketches had to be scanned and then converted to vector outlines using CorelTRACE. All images received fine tuning and editing in CorelDRAW and were then exported to the WFN format using this filter. To use them in a CorelDRAW drawing, consult your clipart catalog for the name of the symbol "library" containing the symbol you want, then select the  tool. Position the cursor on your page where you want to place the symbol. Press and hold the Shift key and click the mouse. The symbol selection dialog box then appears. Simply select the appropriate library and you will be presented with a visual "list" of the symbols. You can use the scroll bars to view the contents of the library. When you have found the desired symbol, double-click on it to bring it into the drawing. Alternatively, you can specify the actual character number in the small box at the upper left and then press on OK. You can also specify the size of the symbol before bringing it into your drawing.

And you're not just limited to using such custom typefaces and symbols within CorelDRAW. Once you have modified or created a new WFN typeface, you can use Corel's WFN BOSS Typeface Conversion Utility to convert it to ZSoft's TypeFoundry format. That program in turn, permits you to generate a typeface which you can use directly in the Ventura Publisher and PageMaker page layout programs! In fact, that's exactly how the CorelDRAW icons such as ,  and  you'll see throughout your CorelDRAW documentation were created. With the use of a scanner, you could even create a typeface based on your individual handwriting! Hieroglyphics, anyone? The possibilities are exciting and limited only by your imagination.

Designing Characters

Sources

A graphic which is to be converted to a character can be obtained in a couple of different ways. Typically this is either a scanned and traced image or a graphic created directly in CorelDRAW. If you are scanning an image, you can then either convert the scanner's bitmap file (PCX or TIFF) to a vector image using CorelTRACE or you can import the file directly into CorelDRAW and use the Autotrace function to produce the vector outline. Consult the main User's manual and the CorelTRACE guide for more information on these functions.

If you are scanning a graphic, a general rule of thumb here is that the larger the graphic, the more accurate the final result will be. Of course, you will also produce a large scanner file if you're starting with a large original, but this is really not important, since it may be discarded *after* it has been traced. A simple way to create a large, page-sized graphic for scanning from an under-sized original is to enlarge the original with a photocopier until it is a reasonable size. NOTE: If you intend to trace the scan using CorelTRACE, keep the image size **below** 10" by 10", otherwise the files become too large for the program to handle.

Similarly, if you are creating or modifying an object directly in CorelDRAW for conversion to a typeface character, you should review it *before* making the conversion. The best way to judge a graphic's appearance is to print it out at a decent size. Scale your graphic so that it nearly fills an 8.5" x 11" page, then print it. Make changes as required to the scaled-up graphic, based on the appearance of the printout.

Points on Typography

The art of typography is complex and well beyond the scope of this reference guide. If you want to create a completely new typeface, many good reference books are available on the subject. Whether creating or modifying an existing typeface, refer to the following illustration for a few of the basic terms you should familiarize yourself with.



From the diagram, it is apparent that all your uppercase letters should have the same height. Similarly, your lowercase characters should all have the same x-height. Ascenders and descenders should also be more-or-less uniform in the distance they extend away from the x-height. These points are important to remember, especially if you are using this filter to modify just a few characters within an existing typeface. If character heights and ratios are not uniform, they will appear odd.

The key to successful character creation is to work with a *large* object. The Symbol & Typeface export filter is sensitive to the size at which you create your typeface character. Therefore, defining an object's shape originally at a large size will be the same as creating that typeface character at a large point size when running the conversion. When you use your new typeface character(s) at smaller sizes, the result will *generally* be very clean and accurate.

Sizing your Object

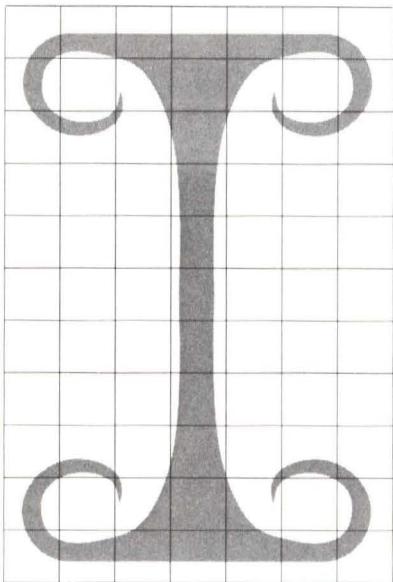
In the following procedures, we will suggest creating your object at a size suitable for the exportation of a 720-point character. At such a size, most objects will fit neatly into an 8.5" by 11" page, making it easy to print and review the graphic. This is also about half the size of CorelDRAW's upper limit of 1440.0 points for characters. If in the future you should ever use your new character at sizes approaching the maximum, the enlargement from 720 points will therefore be two-fold increase at the most. If the character's appearance is satisfactory at 720 points, then such an enlargement factor should not noticeably affect the appearance. If part of your object lies outside the safe printing area of an 8.5" x 11" page, merely select *Fit to Page* when printing. The computer will then temporarily scale the graphic to fit the page.

Printer Limitations

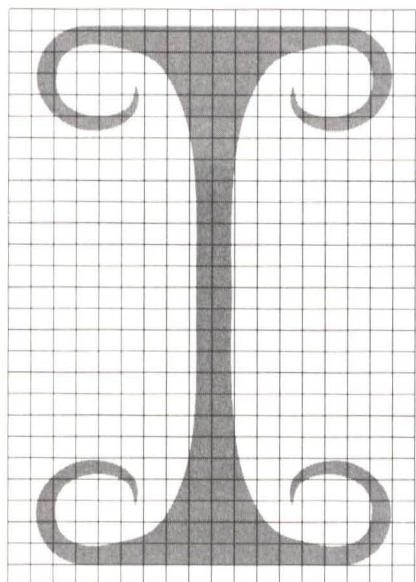
In order to produce characters that will print as you expect at more normal point sizes (ie/ 20 to 40 points), you must be aware of the resolution of your printer. At 300 dots per inch, typical for a laser printer, a 36-point size character will be printed with a maximum vertical resolution of 150 dots, since there are 72 points in an inch. Similarly, a 12-point character, typical letter-size type, will be printed with a maximum vertical resolution of only 50 dots.

If the characters you create are very elaborate, comprising many small, intricate curves, swirls or segments, your printer may not be able to handle these adequately at small point sizes. You then have a few options: either use your characters only at larger point sizes, print your work at higher resolution, or simplify the characters you create. A Linotronic printer can yield resolutions of up to 2540 dots per inch. That means a 6-point character will be printed with a maximum vertical resolution of 212 dots. You can see why such a printer is capable of rendering much finer detail. By the same token, a dot matrix printer running at 120 dots per inch will try to render your 6-point character with only 10 dots vertically!

In the accompanying illustrations, a customized uppercase "I" has been overlain with grids of varying size. If you consider the "I" as being a 6-point character, then each square in the grid can be thought of as a "dot" that can either be turned "on" or "off" (printed or not) by that particular printer. While this is not strictly the way printers work, the analogy is close enough to make the point. You can see that the Linotronic typesetter would have no problem with this character at 6-points, or even smaller. However, the dot matrix printer would only be able to render a very poor approximation. Even the 300 dpi laser would give unacceptable results at this size (at 12 points or greater, it would be satisfactory). And the situation is actually even worse than illustrated. By definition, a character's point size is measured as the distance from baseline to baseline of two lines of text using that point size. The illustration shows "cap height" rather than "point size". Obviously, the more dots available, the closer the printed result will be to your expectations. The bottom line is simply this: don't create a character that is too complex for your printer to handle at the size you want to use it at.

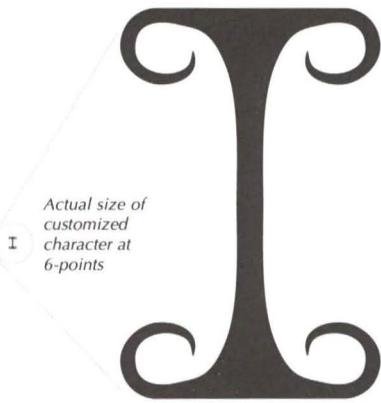


Dot matrix printer "grid" - 120 dpi

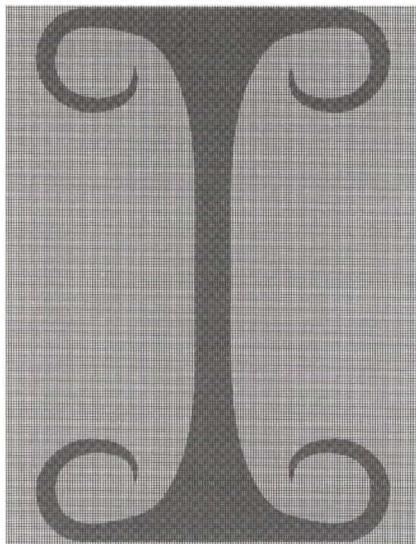


Laser printer "grid" - 300 dpi

Each square on a grid represents a "dot" the particular printer can use to try to render the character at a size of 6 points. Squares would either be filled or not, depending on whether any part of the character lays inside them.



Customized character "I"
you wish to create



Linotronic phototypesetter "grid" - 2540 dpi

Testing your Object

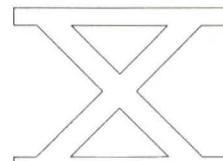
You can test the suitability of an object you wish to convert to a typeface by performing this test. Assuming that you're creating an uppercase character, size your object so that it has a height of about 6" (its "cap height"). Save your file and print it. Use this printout for comparative purposes. Select the object and scale it down to 2% of its original size, then print it out again. This will approximate the printed appearance of the character if you use it at a 12-point size. Scaling it down to 4% of its original size would approximate 24-point type, 1% of original size would be roughly 6-point type, and so on.

If the printed appearance at these smaller sizes is not suitable, then simplify the character, use it only at larger point sizes, or use a printer capable of higher resolution.

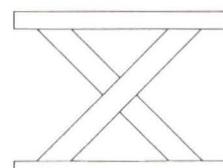
Limitations

There are a few conventions and restrictions to observe when creating a character for WFN typefaces using this filter. They are as follows:

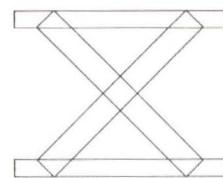
1. A character that you create or modify must be a *single* or *combined* object. Multiple objects or groups cannot be successfully exported. If you attempt such an export, the procedure will be aborted without altering the WFN file. If your character consists of a number of visually separate lines or shapes, they must all be selected and *combined* (not grouped) into a single object before exporting it.
2. Only one combine operation is allowed per character. You **should not** combine a series of objects and then combine this with another object(s) before exporting it. If you do, the export will proceed, but the results will probably not be acceptable because the character fills become unpredictable.
3. You **should not** have any crossing lines in your image. An object has to be either inside or outside any other object before performing the combine. **No line intersections of any kind are recommended.** Just as was the case in Item 2 above, the export will proceed, but the results will probably not be acceptable. The illustration of the Roman numeral "X" shows two possible ways of *properly* creating such a character outline.
4. WFN font files do **not** contain any fill or outline color attributes, nor any information regarding line thickness. If any such information is assigned to your character when you create it, it will be ignored during the WFN export operation.



*Correct outline
(3 combined objects)*



*... also a correct outline
(5 combined objects)*



INCORRECT outline!

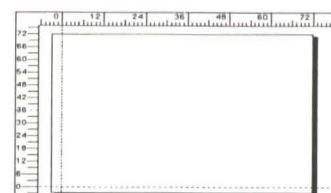
Preparing your Object-Character

This section provides a step-by-step procedure for preparing your graphic object for conversion to a character in a WFN typeface. The same procedure may be followed as often as required, either to change just a few characters within an existing typeface or to build an entirely new face.

1. If the character you are about to create will be part of an existing typeface, then note the following carefully.
Make a copy of the existing typeface (e.g. Avalon.WFN) using DOS or the Windows File Manager and store it in a safe place on your hard drive. A better approach still is to make a copy of the existing typeface in the same directory as the original (usually Windows\Coreldrw), but assign it a unique name, e.g. "&Avalon.WFN". Use the **renamed** version of the typeface to export your character to. The reason for doing this is simple. When you export to an *existing* typeface, the new character will overwrite the current definition and you will probably want an *unaltered* copy of this face for use in the future. If you are creating a brand new face, this is not a problem, since there are no characters to overwrite. Also, if you name your new or modified fonts beginning with "&", they will be easy to identify in the fonts selection box. And there's no danger of them being overwritten by a future upgrade of CorelDRAW (we won't name any fonts beginning with "&").
2. As mentioned previously, we suggest creating your characters at a large size. If you intend to export a number of characters, you should be consistent with their heights, otherwise they may appear odd. An easy way to ensure this is to define a certain page size and let **that** become the point size you're creating at. Go into CorelDRAW's *File* menu and click on *Page Setup*. Click *Custom* for the size, then click on the dimensional units until "points" is displayed. Set both the horizontal and vertical units to 750 (this gives you a page that's close to 10.5" x 10.5"). Ensure your rulers are turned on.

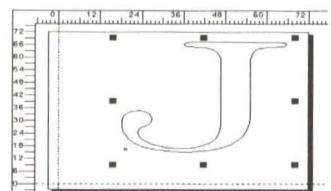


3. You must then set the character's base point or origin on the page. This is essential in establishing the character's (or typeface's) baseline. This point is usually defined as the lower left corner of the bounding rectangle that completely encloses the character (even though no part of the character actually has to lie on this point). **All characters exported to a single typeface must have the same basepoint.** To set it, place your cursor in the top left-hand corner in the space where the rulers intersect. Hold down the left mouse button and drag the cursor to a point 30 points up from the bottom of the page and 30 points in from the left side. This resets the rulers so that the intersection point is their new origin, and that origin also becomes the character's basepoint.

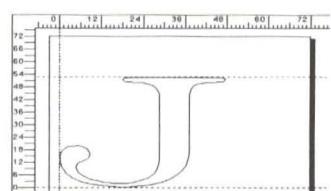


4. You should then set vertical and horizontal guidelines to intersect at this point. This provides you not only with a visual reference when creating your character, but more importantly, a way to precisely line up that character's outlines with the base point. It also leaves you with 720 points from the horizontal guideline to the top of the page. This is the point size you will be creating your characters at.

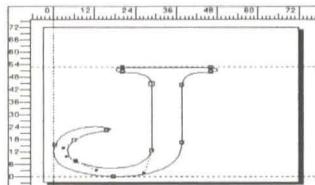
5. The next step is the actual object you wish to export as a character. This can either be an existing character within one of the fonts supplied with CorelDRAW, or it can be a completely new graphic you've scanned or created on screen. If it is a character from an existing typeface, such as the "J" in our example, then you should bring it in at the scale you intend to modify it at. In other words, if you're exporting the characters at 720 points, then bring the original, unmodified characters in at 720 points. This lets you maintain the proper vertical scale, unless you're creating a special effect such as over-sized characters, subscripts, etc.



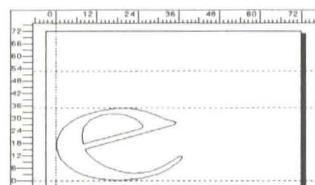
6. Select your graphic and convert it to curves.. Next, move it towards the basepoint. With the *Snap to Guidelines* on, its bounding box will "stick" to the guidelines. You may want to de-select the *Snap to Guidelines* in order to precisely place the maximum lower and left outlines on the guides, as shown in the illustration. You may have noticed something a bit odd by now. While you have 720 points of vertical space between the



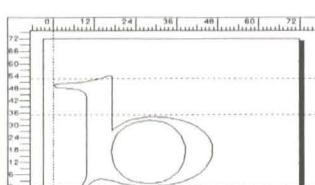
horizontal guideline and the top of your page, the 720-point character does not go to the top of the page. Remember, point height is defined as the distance from baseline to baseline between two lines of text. The height of the 720-point character you see on screen is its "cap height". The distance from the top of this character to the top of the page is the difference between point size and cap height. You should bring down another horizontal guideline and place it at the top of this character. This will act as your cap height reference. Unless you're creating a special effect, all uppercase characters and lowercase case characters with ascenders you intend to export should be sized to this guideline.



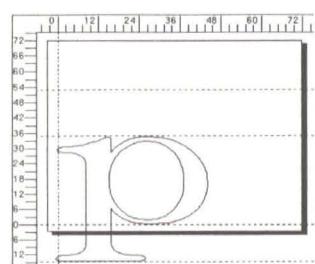
7. Modify the graphic as required. Remember, if it was originally a typeface character, convert it to curves first. You can then use the tool to customize its shape. Be sure to adhere to the limitations discussed earlier, especially those on crossing lines and grouping/combining.



8. If you've brought a lowercase character in from an existing typeface, you may want to bring down yet another horizontal guideline to mark the x-height. Remember, just as with the cap heights, the x-heights in a typeface should be fairly consistent, otherwise the modified characters may look odd or out of place. Lowercase characters with ascenders *generally* have the same height as uppercase characters. If your character is lowercase with a descender, bring down yet another guideline to keep these consistent as well. Descenders trailing off the bottom of the page are of no concern.



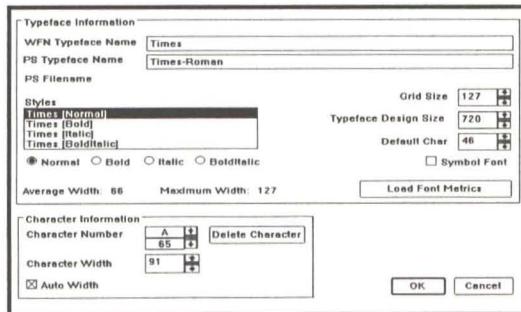
9. When you are finished shaping the graphic, you may want to proof it by printing it. If you've followed the suggested sizes in the previous steps, you should usually have no problem printing on an 8.5" by 11" sheet. With certain characters (symbols, "W", "m", etc.) part of the character may lie outside the page. To get around this, do **not** physically scale down your character to print it. Just select the *Fit to Page* option in the printing dialog box. This tells the computer to scale the graphic temporarily to match the paper size of your printer. If the printed result is acceptable, you're then ready to convert the graphic to a character.



Converting Objects to Type Characters

To begin the export, click on the FILE menu and select *Export*. Use the scroll bar to view the list of available formats and choose "**Corel Symbol & TypefaceWFN**". You can then select the directory containing the typeface file you wish to export your character to. This is generally your CorelDRAW directory, since that's where the program looks to find its fonts. If you are creating a new typeface, enter the filename you want and click on OK. We suggest you adopt the convention of naming these files beginning with an ampersand, such as "&Avalon.wfn". This makes it easy to identify the file in the font selection list. It also removes the possibility of your custom typeface being overwritten by a future upgrade of CorelDRAW. This could occur if the name we choose for one of our future typefaces matches a name you have chosen. We will not name any typefaces beginning with "&".

If this is the first time you're exporting an object to that font file, a message will appear informing you that the file does not exist. You then have the option to create the file or cancel the process. If you choose to proceed, a dialog box will appear which allows you to specify the data needed to create the typeface character and/or new WFN file.



The options contained in the various fields are as follows:

WFN Typeface Name

This is the name of the typeface that the chosen WFN file is based upon. For example, the "Times" screen above was obtained when exporting to a copy of the WFN file "Toronto.WFN". If you're creating a new typeface, you can specify whatever you want here.

PS Typeface Name

This is the PostScript printer fontname. If your character is being added to an existing typeface (e.g. "Toronto"), then a name (e.g. "Times-Roman") will appear in this field.

You can change this if you wish, *but beware* ... if you don't change it and then print a file using your modified typeface, you must **not** select *All Fonts Resident* in the printing dialog box. If you do, then the printer's resident "Times-Roman" characters will be used to print the text, not the "Toronto" characters which you've modified. If the typeface is a totally new one you've created, then you can assign any name you want here. In either case remember, you should **not** print using *All Fonts Resident* since your modified typeface is not resident in the printer.

If you really want to use your resident printer fonts, there are a couple of ways to do that. When you've finalized your drawing, you can convert the text string employing your customized typeface to curves. Since that string will no longer be text, you may then select *All Fonts Resident*, provided the other text in your illustration uses PostScript resident typefaces. Still another approach is available through the latest version of the WFN BOSS utility. It actually allows you to create downloadable PostScript typefaces so that you can make your customized typefaces resident in your printer (see the WFN BOSS section of this guide under Adobe Type 1 export).

PS Filename

This is an information field only, containing the PostScript filename. It is usually blank. If the typeface you're exporting has a PS Filename assigned to it, that name will appear in this field.

Styles

These are the typestyles that are contained within the current typeface. If the typeface is an existing one, up to four styles will be listed in this field: Normal, Bold, Italic, and/or Bold-Italic. You must choose the style that you wish to export your character to. Either click on the name or on one of the radio buttons. If you are creating a brand new typeface and this is the first character you're sending to it, no names will appear. Just click on the radio button below the list that matches the style you wish to create. Symbol typefaces only have one style, and this is usually specified as Normal.
NOTE: if you want it to export the character to more than one style, you'll have to repeat the export process for each style, after making appropriate modifications to the object. Select the style before specifying any other variables or names.

Average Width

This is an information field only, and it tells you the average width of all the characters in the file. This and the *Maximum Width* field are updated when you first open the export filter and everytime a new character definition is added to the file.

Maximum Width

This is also an information field, and it tells you the maximum character width in the file. This and the *Average Width* field are updated when you first open the export filter and everytime a new character definition is added to the file.

Grid Size

This is a complex variable dealing with a number of factors within the typeface such as its granularity and certain scaling parameters. If you are exporting an object to an existing typeface, a number will appear in this field (ie/ 127). **Do not change this**. If you do, then you will have to re-export all characters within that typestyle so that they will be matched. If you're creating a new typeface and this is the first object you're placing into that face, then you can enter any number between 127 and

1024. The default value that appears is 512 and there's little reason to change this. All characters you create in a new typeface should have the same value here.

Typeface Design Size

This is the point size at which you've created the character being exported. If you're creating a new typeface or symbol face and followed the procedures detailed under *Designing* and *Preparing* your character, then this should be set to 720 points.

Default Char

This is the default character that CorelDRAW will use if it doesn't find the character that's been requested when you create text in a drawing. Character 046 (the "period") is used in existing CorelDRAW typefaces. You can stay with this for consistency, or choose any value between 032 and 255. If you're creating a new typeface, you **must** define a default character. A simple way to do this is to create a text "period" in CorelDRAW from a typeface such as Toronto. Bring it in at 720 points, convert it to curves and then export it as character 046 to your custom typeface.

Symbol Font

This checkbox tells CorelDRAW what type of font you are creating or modifying. If you are modifying an existing character in one of the CorelDRAW's **non-symbol** fonts, or creating your own typeface based on the Roman alphabet (the one you're used to), then **do not** check this box. This box must only be checked when creating or modifying a symbol font, or when you're producing a typeface based on a non-Roman language (ie/ Cyrillic, Kanji, etc.).

Load Font Metrics

This button allows you to apply the width data from an AFM file to the typeface you're modifying. When you click on this option, you then select an appropriate AFM file. Such files can be created by the WFN BOSS's Type 1 export conversion or in ZSoft's TypeFoundry program. For experienced users, you can also adjust the width information in such a file using an ASCII text editor. See *Kerning* under the Special Notes section for additional information.

This option can be quite useful, since it can provide both kerning and width information for each character in your typeface. If you are creating or modifying a typeface based on CorelDRAW's "Gatineau.wfn" for instance, you can first produce the AFM file of the *unmodified* typeface through WFN BOSS and/or TypeFoundry. After creating your typeface, click on this option and acquire the original widths by pointing to the associated AFM file. If, at later time, you find the widths obtained from this file are not appropriate for certain characters you've modified, you can re-export the affected characters and adjust the widths manually. At that time, do **not** click on this option.

Character Number

This is the ASCII or ANSI number of the character that is currently being exported. CorelDRAW uses the ASCII set for characters 32 to 127 and the ANSI set for characters above 127. Refer to your Character Reference Chart for the number of the character you want to export to. You can also see the character in the small window below the number. This display changes when using the scroll bar to select the number. If a character does not exist in the file, it will appear as grey instead of black.

Character Width

This is the width of your character in point measure. If you are modifying a character in an existing typeface, a value will appear in this box. Unless you're creating a special effect (e.g. oversized characters, etc.), do not change this variable and **de-select** the *Auto Width* option before exporting the character. In this way, you keep the original design width for that character. If you do alter the width, the character may seem mis-proportioned when compared to other characters in that typeface. If you're creating a new typeface, you still don't have to concern yourself too much with this variable, provided you have the *Auto Width* option selected. It will calculate a width for the character based on its shape and design size. If, after using and examining the character in a CorelDRAW file, you don't like the width, you can always re-export the character and adjust the width manually. At that time, de-select *Auto Width* and use the scroll bars to increase or decrease the width as desired.

Auto Width

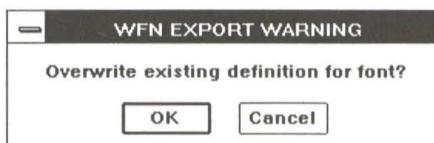
When selected, this option automatically calculates a width for the character being exported, based on its shape and design size. If you're knowledgeable in typography or have used this filter extensively enough to develop a "feel" for the character widths, then set the widths manually as described above. Otherwise, we suggest you select this option when exporting a character. Its use also applies an additional 5% of the object's actual width to the right side of the character for inter-character spacing purposes. If you find this is too much or too little when using the character in CorelDRAW, you can always kern it manually.

Delete Character

This button is used to remove the selected character from the typestyle.

Saving the Character

Once you have specified all the fields and variables in this dialog box, click on OK to export your character. If you are upgrading an existing character definition, you will be prompted with a message asking if you want to overwrite this definition.



If you click on OK, the character definition will be upgraded, otherwise the export will be aborted.

Using your Custom Typefaces

If you followed the preceding steps, you now have a customized WFN file in your CorelDRAW directory. Undoubtedly you'll want to try it out. However, before doing so, there are a few additional steps you may have to perform.

- 1) If you exported a character to an existing typeface that you did not rename (**not** the recommended route to follow, unless you made a copy of the original and stored it elsewhere), then there is nothing further to do. If you create a text string in CorelDRAW and assign to it your modified typeface, your customized characters will appear on screen.
- 2) If on the other hand, you have produced a brand new typeface, you **must** create a default character for that face, if you haven't already done so. See the description under *Default Char* in the previous section.
- 3) You must then add this new typeface name to the CORELDRW.INI file, which informs the program of the available list of typefaces. This also applies to existing faces you've copied and renamed for customization purposes (the *recommended* way of modifying existing faces). To add this name is a very simple procedure.
 - a) First, exit (do not just minimize) CorelDRAW. Double-click on the Notepad icon in your Windows 3.0 Program Manager and open the file CORELDRW.INI. This is located in your CorelDRAW directory. Once the file is open, scroll down until you find the section titled [CorelDrwFonts] or [CorelDrwSymbols]. You'll find a listing of all your current typeface or symbol WFN files, respectively. Click on a position in the file at the beginning of a line where you'd like to add the name of your customized face and press ENTER. You can then type in any name you want here, up to 25 characters long with no spaces allowed (e.g. "My_Avalon"). This is the name that will appear in the font selection dialog box in CorelDRAW.

- b) Immediately following this name must be an equals sign, which in turn is also followed by a number. This number can have several different values, depending on the typeface you're adding here. What it represents is the *sum* of the *typestyles* contained in your typeface. The four different typestyles available each have a unique "weight" number assigned to them. They are as follows:

Normal=1
Bold=2
Italic=4
Bold-Italic=8

If the typeface you've created just contains a "Normal" typestyle, then "1" is the number you would enter after the equals sign. If on the other hand, your typeface contains all four different typestyles, then the sum of these is "15" ($1+2+4+8$), and 15 must be entered after the equals sign. So it goes with any combination of styles as well (e.g. Normal and Italic styles only would require a "5" after the equals).

- c) After the number, leave a space and then enter the name of the WFN file you modified or created, followed by .wfn (e.g. "&Avalon.wfn"). This name can have eight characters maximum, and is the name you clicked on or created at the beginning of the WFN export procedure.
- d) Finally, after this name, leave another space and enter the number 0. The numbers 1 and 3 are also valid, but not in this case, since they signify that the typeface is resident in your PostScript printer. You may at a later time want to go through the steps of creating AFM and PFB files through WFN BOSS or TypeFoundry to make your customized typeface resident. At that time, you'll have to change this zero to either a 1 or 3. For now, leave it at 0. Your name entry should now look something like this:

My_Avalon=15 &avalon.wfn 0

- e) Once you've completed these changes, save the file and exit Notepad. You can then re-open CorelDRAW and your customized typeface name will appear on the list of available typefaces. There is no need to exit Windows before re-opening CorelDRAW, unless you are operating a large disk cache. This filter will write changes to the disk copy of the typeface file, but has no way of updating the file in a cache.

Special Notes

Prior to modifying an existing typeface, you may want to make a copy of it elsewhere on your hard drive. In this way it will be easy to retrieve if you make a mistake or forget to assign a unique name to the modified face. Failing this, you can always retrieve a copy of the original by extracting it from the archived font files on your CorelDRAW disks. Use the LHARC utility, which can also be found on those disks or in your CorelDRAW directory. To learn how to use this routine, go to DOS and get into the directory containing LHARC.EXE. Type LHARC and press ENTER for an instruction list.

If you have modified an existing typeface, give it a unique WFN name beginning with "&" (e.g. "&Avalon.wfn"). If you don't, there always a danger that in a re-installation or future upgrade of CorelDRAW, that typeface will be overwritten. If you really want to use the existing WFN name, then store a copy of your *modified* typeface in a safe place, either in another directory on your hard drive, or on a floppy disk.

Kerning information is not encoded by this export filter unless you select *Load Font Metrics*, as previously described. Since CorelDRAW allows you to do on-screen interactive kerning, it's really not required. If you wish to produce a typeface for use in Ventura or PageMaker for example, export your modified WFN typeface to OTL format using WFN BOSS. The OTL format can be read by ZSoft's TypeFoundry program, which allows you to set kerning information for each character. You can then create the VFM or AFM files required by Ventura or PageMaker. You can then use such an AFM file back in CorelDRAW and apply this kerning information to your custom typeface via the *Load Font Metrics* option. For experienced users, you can also add or modify kerning values in an AFM file using an ASCII text editor.

Protecting your Original CorelDRAW Typefaces

Protecting your Custom Typefaces

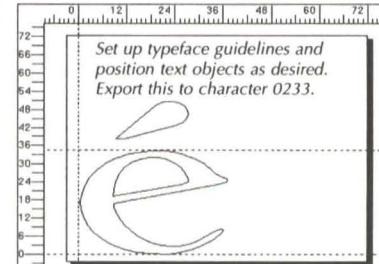
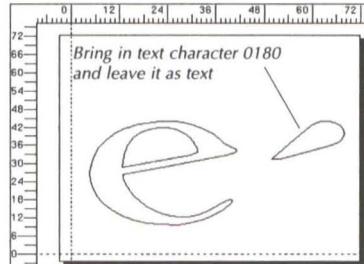
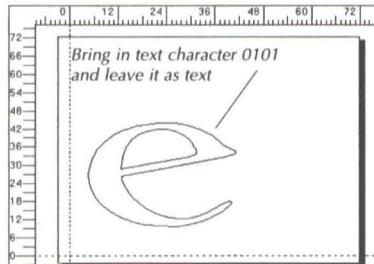
Kerning

Indirect Characters

Indirect characters are those composed of two or more direct characters. Primary examples of these are accented characters such as "é" (number 0233). Instead of storing this character as a complete entity on its own, CorelDRAW uses two existing direct characters to form it. This one is actually composed of the characters "e" (number 0101) and " " (number 0180). When the accented character is required, the program then assembles it from the direct characters. This method of storing typeface allows for more flexibility in character design, as well as more compact typeface file sizes.

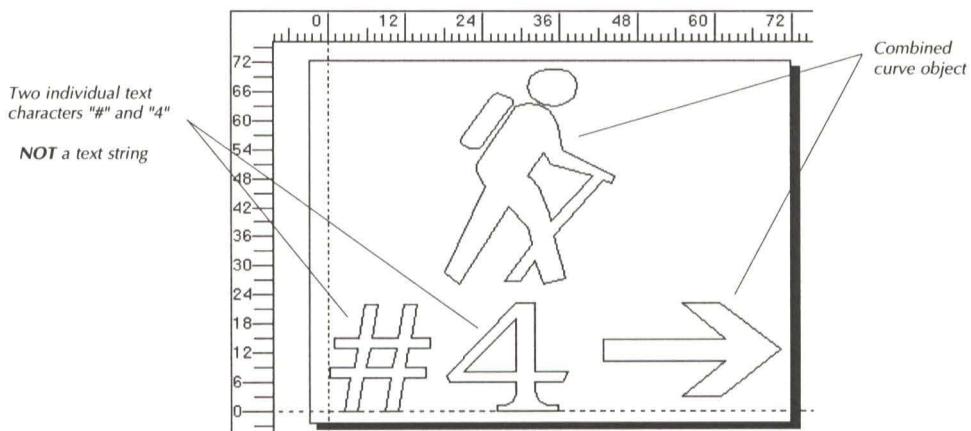
To create an indirect character is a fairly straightforward process. It is illustrated by way of the example cited above; "é".

- 1) The first step is to follow the procedures already detailed to modify/create and then export the two direct characters required to assemble the indirect character. This leaves you with characters defined for numbers 0101 and 0180.
- 2) The next step is to bring these two characters onto your working page and position them in the way you want them to form the indirect character. When that is done, **do not convert them to curves**, just leave them as text.



- 3) Begin the export procedure as you have previously, by calling the Corel Symbol & Typeface export filter and specifying the typeface you're creating the indirect character in. Select the appropriate character number, in this case 0233, and export it. The program records the fact that two existing direct characters form this indirect character. The positions of these characters relative to each other are also recorded. When you use character 0233 in text in the future, the program assembles it according to this information.

Indirect characters can be assembled from as many as **four** direct text characters. In addition, these may be exported along with **one** combined curve object, as shown below in the "Trail Marker" character. But **do not** group or combine the text and curve objects before exporting them. Also, if your indirect character does contain one curve object, then before exporting the character, you **must** select that curve object and "bring it to the front". This is done via the *To Front* command under CorelDRAW's ARRANGE menu. Once this is done, you can proceed with the export.



In summary, the things to remember when creating indirect characters are as follows:

- Up to four direct text objects can be placed on a page to be used in the creation of a single indirect character. These should all come from the same typeface that you're creating the indirect character in.
- Do **not** convert the direct text characters to curves.
- Direct text characters and a single combined curve object can go into the formation of an indirect character. These should all be properly positioned with respect to one another in exactly the way you would like them to appear as the indirect character.
- If your indirect character *does* contain one curve object, then before exporting the character, you **must** select that curve object and click on the *To Front* command under CorelDRAW's ARRANGE menu.

Notes

A

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U

Y



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KEY CAP CHART

ITC Zapf Dingbats®

For use with Microsoft® Windows Applications

KEY CAP	CHAR						
SPACE		8	X	P	☆	h	✿
!	♪	9	+	Q	*	i	✿
"	♫	:	+	R	✿	j	✿
#	♫	;	+	S	✿	k	✿
\$	♫	<	+	T	✿	l	●
%	♫	=	†	U	✿	m	○
&	⌚	>	†	V	★	n	■
'	⌚	?	†	W	✿	o	□
(✈	@	‡	X	✿	p	□
)	✉	A	✡	Y	✿	q	□
*	☛	B	†	Z	✿	r	□
+	☛	C	❖	[✿	s	▲
,	☛	D	❖	\	✿	t	▼
-	☛	E	❖]	✿	u	◆
.	☛	F	♦	^	✿	v	❖
/	☛	G	❖	-	✿	w	▷
O	☛	H	★	`	✿	x	-
I	☛	I	☆	a	✿	y	-
J	☛	J	★	b	✿	z	
K	✓	K	☆	c	✿	{	‘
L	✓	L	☆	d	✿		,
M	✖	M	☆	e	✿	}	“
N	✖	N	☆	f	✿	~	”
O	✖	O	☆	g	✿		

To access the characters on this page only, hold down the ALT key,
and use the numeric keypad to type the ASCII Character Code.

CHAR	ASCII CHAR CODE						
♪	161	❶	185	❸	209	⇒	233
♫	162	❷	186	❹	210	⇒	234
❖	163	❻	187	❻	211	⇒	235
♥	164	❷	188	➔	212	⇒	236
♣	165	❸	189	→	213	⇒	237
♠	166	❹	190	↔	214	⇒	238
♣	167	❺	191	↓	215	⇒	239
♣	168	❻	192	↘	216		240
♦	169	❵	193	➔	217	⇒	241
♥	170	❶	194	↗	218	⇒	242
♠	171	❷	195	➔	219	⇒	243
❶	172	❷	196	➔	220	⇒	244
❷	173	❷	197	→	221	⇒	245
❸	174	❷	198	➔	222	⇒	246
❷	175	❷	199	➡	223	⇒	247
❷	176	❹	200	➡	224	⇒	248
❷	177	❻	201	➔	225	⇒	249
❷	178	❻	202	➤	226	⇒	250
❷	179	❻	203	➤	227	⇒	251
❷	180	❻	204	➤	228	⇒	252
❷	181	❷	205	➔	229	⇒	253
❷	182	❷	206	➡	230	⇒	254
❷	183	❷	207	⬇	231		255
❷	184	❷	208	➔	232		

CHARACTER ACCESS CHART

ITC Zapf Dingbats

For Use with Xerox® Ventura Publisher

KEY CAP	CHARACTER	KEY CAP	CHARACTER	KEY CAP	CHARACTER
SPACE		@	⊕	'	❖
!	☛	A	◊	a	❖
"	✖	B	✚	b	❖
#	✖	C	❖	c	*
\$	✖	D	❖	d	*
%	☎	E	❖	e	*
&	⌚	F	◆	f	*
,	⌚	G	❖	g	*
(✈	H	★	h	*
)	✉	I	☆	i	*
*	👉	J	●	j	*
+	✖	K	★	k	*
,	🐰	L	★	l	●
-	✉	M	★	m	○
.	✉	N	★	n	■
/	✉	O	★	o	□
0	✉	P	★	p	□
1	✉	Q	*	q	□
2	✖	R	*	r	□
3	✓	S	*	s	▲
4	✓	T	*	t	▼
5	✖	U	*	u	◆
6	✖	V	*	v	❖
7	✖	W	*	w	▷
8	✖	X	*	x	▬
9	✚	Y	*	y	▬
:	✚	Z	*	z	▬
;	✚	[*	{	‘
<	✖	\	*		,
=	✖]	*	}	“
>	✖	^	*	~	”
?	✖	-	❖		

To access the characters on this page only, hold down the ALT key,
and use the numeric keypad to type the ASCII Character Code.

CHARACTER	ASCII CHARACTER CODE	CHARACTER	ASCII CHARACTER CODE	CHARACTER	ASCII CHARACTER CODE
	128	①	160	☛	192
☛	129	②	161	➡	193
✖	130	③	162	➢	194
❖	131	④	163	➤	195
❖	132	⑤	164	►	196
♣	133	⑥	165	➡	197
♥	134	⑦	166	▶	198
♦	135	⑧	167	▶	199
♠	136	⑨	168	➡	200
◆	137	⑩	169	⇨	201
♥	138	❶	170	⇨	202
♠	139	❷	171	☛	203
❸	140	❹	172	✖	204
❻	141	❺	173	❖	205
❻	142	❻	174	□	206
❻	143	❻	175	□	207
❻	144	❻	176	□	208
❻	145	❻	177	□	209
❻	146	❻	178	○	210
❻	147	❻	179	▶	211
❻	148	❻	180	✖	212
❻	149	❻	181	✖	213
❻	150	❻	182	❖	214
❻	151	❻	183	▲	215
❻	152	❻	184	▼	216
❻	153	❻	185	◆	217
❻	154	❻	186	❖	218
❻	155	❻	187	▬	219
❻	156	❻	188	▶	220
❻	157	❻	189	▶	221
❻	158	❻	190	⇒	222
❻	159	❻	191		

Typeface Reference Chart

CORELDRAW!

AARDVARK BOLD: (similar to "Aachen Bold")

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789? \$%&*()_-+'{}[]::;/

ARABIA: (similar to "Arnold Böcklin")

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789?@#\$%^&*()_-+=-~'{}[]|\:\;;''/<>

AVALON: (similar to "Avant Garde")

NORMAL

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789?@#\$%^&*()_-+=-~'{}()|\:\;;''/<>

BOLD

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789?@#\$%^&*()_-+=-~'{}()|\:\;;''/<>

ITALIC

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789?@#\$%^&*()_-+=-~'{}()|\:\;;''/<>

BOLD ITALIC

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789?@#\$%^&*()_-+=-~'{}()|\:\;;''/<>

BAHAMAS: (similar to "Bauhaus")

NORMAL

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789?@#\$%^&*()_-+=-~'{}|\:\;;''/<>

BOLD

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789?@#\$%^&*()_-+=-~'{}|\:\;;''/<>

BAHAMAS LIGHT: (similar to "Bauhaus Light")

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789?@#\$%^&*()_-+=-~'{}|\:\;;''/<>

BAHAMAS HEAVY: (similar to "Bauhaus Heavy")

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789?@#\$%^&*()_-+=-~'{}|\:\;;''/<>

BANFF: (similar to "Brush Script")

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789? \$%&*()_- -'{}[]|\:\;;''/<>

BANGKOK: (similar to "Benguiat")

NORMAL

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789?@#\$%^&*()_-+=-~'{}()|\:\;;''/<>

BOLD

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789?1@#\$%^&*()_-+=-~'{}()|\:\;;''/<>

BODNOFF: (similar to "Bodoni Poster")

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789?@#\$%^&*()_-+=-~'{}|\:\;;''/<>

BOLD

ABCDEFGHIJKLMNOPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxyz
 0123456789?@#\$%^&*()_+=-~'{}[]\\;''/<>

ERIE BLACK: (similar to "Eras Black")

NORMAL

ABCDEFGHIJKLMNOPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxyz
 0123456789?@#\$%^&*()_+=-~'{}[]\\;''/<>

BOLD

ABCDEFGHIJKLMNOPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxyz
 0123456789?@#\$%^&*()_+=-~'{}[]\\;''/<>

ERIE LIGHT: (similar to "Eras Light")

NORMAL

ABCDEFGHIJKLMNOPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxyz
 0123456789?@#\$%^&*()_+=-~'{}[]\\;''/<>

BOLD

ABCDEFGHIJKLMNOPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxyz
 0123456789?@#\$%^&*()_+=-~'{}[]\\;''/<>

FRANCE: (similar to "Friz Quadrata")

NORMAL

ABCDEFGHIJKLMNOPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxyz
 0123456789?@#\$%^&*()_+=-~'{}[]\\;''/<>

BOLD

ABCDEFGHIJKLMNOPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxyz
 0123456789?@#\$%^&*()_+=-~'{}[]\\;''/<>

FRANKENSTEIN: (similar to "Fette Fraktur")

ABCDEFGHIJKLMNOPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxyz
 0123456789?@#\$%^&*()_+=-~'{}[]\\;''/<>

FRANKFURT GOTHIC: (similar to "Franklin Gothic")

NORMAL

ABCDEFGHIJKLMNOPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxyz
 0123456789?@#\$%^&*()_+=-~'{}[]\\;''/<>

BOLD

ABCDEFGHIJKLMNOPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxyz
 0123456789?@#\$%^&*()_+=-~'{}[]\\;''/<>

ITALIC

ABCDEFGHIJKLMNOPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxyz
 0123456789?@#\$%^&*()_+=-~'{}[]\\;''/<>

BOLD ITALIC

ABCDEFGHIJKLMNOPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxyz
 0123456789?@#\$%^&*()_+=-~'{}[]\\;''/<>

FRANKFURT GOTHIQUE HEAVY:

(similar to "Franklin Gothic Heavy")

NORMAL

ABCDEFGHIJKLMNOPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxyz
 0123456789?@#\$%^&*()_+=-~'{}[]\\;''/<>

ITALIC

ABCDEFGHIJKLMNOPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxyz
 0123456789?@#\$%^&*()_+=-~'{}[]\\;''/<>

FREEREPORT: (similar to "Freestyle Script")

ABCDEFGHIJKLMNOPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxyz
 0123456789?@#\$%^&*()_+=-~'{}[]\\;''/<>

FUJIYAMA CONDENSED:

(similar to "Futura Condensed")

NORMAL

ABCDEFGHIJKLMNOPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxyz
 0123456789?@#\$%^&*()_+=-~'{}[]\\;''/<>

BOLD

ABCDEFGHIJKLMNOPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxyz
 0123456789?@#\$%^&*()_+=-~'{}[]\\;''/<>

ITALIC

ABCDEFGHIJKLMNOPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxyz
 0123456789?@#\$%^&*()_+=-~'{}[]\\;''/<>

BOLD ITALIC

ABCDEFGHIJKLMNOPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxyz
 0123456789?@#\$%^&*()_+=-~'{}[]\\;''/<>

LINUS: (similar to "Linoscript")

ABCDEF^{GHIJKLMNOPQRSTUVWXYZ}
abcde^{fghijklmnopqrstuvwxyz}
0123456789?@#\$%^&*()_+=-~'{}[]|\\";/<>

MEMORANDUM: (similar to "American Typewriter")

NORMAL

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789?@#\$%^&*()_+=-~'{}[]|\\";/<>

BOLD

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789?@#\$%^&*()_+=-~'{}[]|\\";/<>

MONOSPACED: (similar to "Letter Gothic")

NORMAL

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789?@#\$%^&*()_+=-~'{}[]|\\";/<>

BOLD

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789?@#\$%^&*()_+=-~'{}[]|\\";/<>

ITALIC

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789?@#\$%^&*()_+=-~'{}[]|\\";/<>

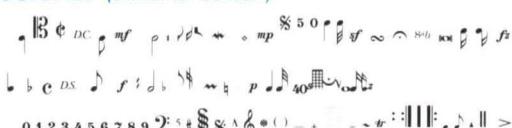
BOLD ITALIC

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789?@#\$%^&*()_+=-~'{}[]|\\";/<>

MOTOR: (similar to "Machine")

ABCDEFGHIJKLMNOPQRSTUVWXYZ
0123456789?@#\$%^&*()_+=-~'{}[]|\\";/<>

MUSICAL: (similar to "Sonata")


B C D E F G H I J K L M N O P Q R S T U V W X Y Z
0 1 2 3 4 5 6 7 8 9

MYSTICAL: (similar to "Mistral")

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789? \$%&*()_+-~'{}[]|\\";/<>

NEBRASKA: (similar to "New Baskerville")

NORMAL

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789?@#\$%^&*()_+=-~'{}[]|\\";/<>

BOLD

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789?@#\$%^&*()_+=-~'{}[]|\\";/<>

ITALIC

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789?@#\$%^&*()_+=-~'{}[]|\\";/<>

BOLD ITALIC

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789?@#\$%^&*()_+=-~'{}[]|\\";/<>

NEW BRUNSWICK: (similar to "New Century Schoolbook")

NORMAL

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789?@#\$%^&*()_+=-~'{}[]|\\";/<>

BOLD

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789?@#\$%^&*()_+=-~'{}[]|\\";/<>

ITALIC

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789?@#\$%^&*()_+=-~'{}[]|\\";/<>

BOLD ITALIC

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789?@#\$%^&*()_+=-~'{}[]|\\";/<>

SOUTHERN: (similar to "Souvenir")

NORMAL

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789?@#\$%^&*()_+=-~'{}}[]|\.;;/<>

BOLD

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789?@#\$%^&*()_+=-~'{}}[]|\.;;/<>

ITALIC

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789?@#\$%^&*()_+=-~'{}}[]|\.;;/<>

BOLD ITALIC

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789?@#\$%^&*()_+=-~'{}}[]|\.;;/<>

STAMP: (similar to "Stencil")

ABCDEFGHIJKLMNOPQRSTUVWXYZ
0123456789? \$% & °()_ - '{}}[] ; ; /

SWITZERLAND: (similar to "Helvetica")

NORMAL

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789?@#\$%^&*()_+=-~'{}}[]|\.;;/<>

BOLD

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789?@#\$%^&*()_+=-~'{}}[]|\.;;/<>

ITALIC

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789?@#\$%^&*()_+=-~'{}}[]|\.;;/<>

BOLD ITALIC

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789?@#\$%^&*()_+=-~'{}}[]|\.;;/<>

SWITZERLAND-BLACK: (similar to "Helvetica Black")

NORMAL

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789?@#\$%^&*()_+=-~'{}}[]|\.;;/<>

ITALIC

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789?@#\$%^&*()_+=-~'{}}[]|\.;;/<>

SWITZERLAND-LIGHT: (similar to "Helvetica Light")

NORMAL

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789?@#\$%^&*()_+=-~'{}}[]|\.;;/<>

ITALIC

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789?@#\$%^&*()_+=-~'{}}[]|\.;;/<>

SWITZERLAND-NARROW: (similar to "Helvetica Narrow")

NORMAL

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789?@#\$%^&*()_+=-~'{}}[]|\.;;/<>

BOLD

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789?@#\$%^&*()_+=-~'{}}[]|\.;;/<>

ITALIC

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789?@#\$%^&*()_+=-~'{}}[]|\.;;/<>

BOLD ITALIC

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789?@#\$%^&*()_+=-~'{}}[]|\.;;/<>

SWZ COND: (similar to "Helv. Cond.")

NORMAL

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789?@#\$%^&*()_+=-~'{}}[]|\.;;/<>

BOLD

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789?@#\$%^&*()_+=-~'{}}[]|\.;;/<>

ITALIC

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789?@#\$%^&*()_+=-~'{}}[]|\.;;/<>

BOLD ITALIC

ABCDEFGHIJKLMNOPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxyz
 0123456789?@#\$%^&*()_+=-~'{}[]|\.;;"'/<>

SWZ COND BLK: (similar to "Helv. Cond. Blk")

NORMAL

ABCDEFGHIJKLMNOPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxyz
 0123456789?@#\$%^&*()_+=-~'{}[]|\.;;"'/<>

ITALIC

ABCDEFGHIJKLMNOPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxyz
 0123456789?@#\$%^&*()_+=-~'{}[]|\.;;"'/<>

SWZ COND LGT: (similar to "Helv. Cond. Lgt")

NORMAL

ABCDEFGHIJKLMNOPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxyz
 0123456789?@#\$%^&*()_+=-~'{}[]|\.;;"'/<>

ITALIC

ABCDEFGHIJKLMNOPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxyz
 0123456789?@#\$%^&*()_+=-~'{}[]|\.;;"'/<>

SWZ INSERAT: (similar to "Helv. Inserat")

ABCDEFGHIJKLMNOPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxyz
 0123456789?@#\$%^&*()_+=-~'{}[]|\.;;"'/<>

TECHNICAL: (similar to "Tekton")

NORMAL

ABCDEFGHIJKLMNOPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxyz
 0123456789?@#\$%^&*()_+=-~'{}[]|\.;;"'/<>

ITALIC

ABCDEFGHIJKLMNOPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxyz
 0123456789?@#\$%^&*()_+=-~'{}[]|\.;;"'/<>

TIMPANI: (similar to "Tiffany")

NORMAL

ABCDEFGHIJKLMNOPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxyz
 0123456789?@#\$%^&*()_+=-~'{}[]|\.;;"'/<>

BOLD

ABCDEFGHIJKLMNOPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxyz
 0123456789?@#\$%^&*()_+=-~'{}[]|\.;;"'/<>

ITALIC

ABCDEFGHIJKLMNOPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxyz
 0123456789?@#\$%^&*()_+=-~'{}[]|\.;;"'/<>

BOLD ITALIC

ABCDEFGHIJKLMNOPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxyz
 0123456789?@#\$%^&*()_+=-~'{}[]|\.;;"'/<>

TIMPANI HEAVY: (similar to "Tiffany Heavy")

BOLD

ABCDEFGHIJKLMNOPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxyz
 0123456789?@#\$%^&*()_+=-~'{}[]|\.;;"'/<>

BOLD ITALIC

ABCDEFGHIJKLMNOPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxyz
 0123456789?@#\$%^&*()_+=-~'{}[]|\.;;"'/<>

TORONTO: (similar to "Times")

NORMAL

ABCDEFGHIJKLMNOPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxyz
 0123456789?@#\$%^&*()_+=-~'{}[]|\.;;"'/<>

BOLD

ABCDEFGHIJKLMNOPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxyz
 0123456789?@#\$%^&*()_+=-~'{}[]|\.;;"'/<>

ITALIC

ABCDEFGHIJKLMNOPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxyz
 0123456789?@#\$%^&*()_+=-~'{}[]|\.;;"'/<>

BOLD ITALIC

ABCDEFGHIJKLMNOPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxyz
 0123456789?@#\$%^&*()_+=-~'{}[]|\.;;"'/<>

UMBRELLA: (similar to "Umbra")

ABCDEFGHIJKLMNOPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxyz
 0123456789?@#\$%^&*()_+=-~'{}[]|\.;;"'/<>

UNICORN: (similar to "University Roman")

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
 a b c d e f g h i j k l m n o p q r s t u v w x y z
 0 1 2 3 4 5 6 7 8 9 ? \$ % & * () _ + = ~ ' { } [] : ; ' /

USA BLACK: (similar to "Univers Black")

NORMAL

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
 a b c d e f g h i j k l m n o p q r s t u v w x y z
 0 1 2 3 4 5 6 7 8 9 ? @ # \$ % ^ & * () _ + = ~ ' { } [] : ; " ' / < >

ITALIC

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
 a b c d e f g h i j k l m n o p q r s t u v w x y z
 0 1 2 3 4 5 6 7 8 9 ? @ # \$ % ^ & * () _ + = ~ ' { } [] : ; " ' / < >

USA LIGHT: (similar to "Univers Light")

NORMAL

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
 a b c d e f g h i j k l m n o p q r s t u v w x y z
 0 1 2 3 4 5 6 7 8 9 ? @ # \$ % ^ & * () _ + = ~ ' { } [] : ; " ' / < >

ITALIC

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
 a b c d e f g h i j k l m n o p q r s t u v w x y z
 0 1 2 3 4 5 6 7 8 9 ? @ # \$ % ^ & * () _ + = ~ ' { } [] : ; " ' / < >

VOGUE: (similar to "VAG Rounded")

NORMAL

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
 a b c d e f g h i j k l m n o p q r s t u v w x y z
 0 1 2 3 4 5 6 7 8 9 ? @ # \$ % ^ & * () _ + = ~ ' { } [] : ; " ' / < >

BOLD

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
 a b c d e f g h i j k l m n o p q r s t u v w x y z
 0 1 2 3 4 5 6 7 8 9 ? @ # \$ % ^ & * () _ + = ~ ' { } [] : ; " ' / < >

ZURICH CALLIGRAPHIC: (similar to "Zapf Chancery")

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
 a b c d e f g h i j k l m n o p q r s t u v w x y z
 0 1 2 3 4 5 6 7 8 9 ? @ # \$ % ^ & * () _ + = ~ ' { } [] : ; " ' / < >

*...and with the **WFN BOSS** typeface converter,
 you can access thousands more from such
 manufacturers as:*

*Adobe**

*Bitstream**

*Casady & Greene**

*Compugraphic**

*DigiFonts**

*HP Type Director**

*Image Club**

*Linotype**

*Monotype**

*The Font Company**

*Treacyfaces**

*... and you can create your own typefaces using
 packages such as:*

Fontographer ZSoft Type Foundry**

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With CorelDRAW you have immediate access to over 150 typestyles from 56 different families. The commonly-known family names and their COREL equivalents are listed below:

Trademarked name* COREL equivalent

Aachen Bold (Letraset™)	AARDVARK BOLD
American Typewriter (ITC™)	MEMORANDUM
Arnold Böcklin	ARABIA
Avant Garde (ITC™)	AVALON
Bauhaus (ITC™)	BAHAMAS
Bauhaus Light (ITC™)	BAHAMAS LIGHT
Bauhaus Heavy (ITC™)	BAHAMAS HEAVY
Benguiat (ITC™)	BANGKOK
Bookman (ITC™)	BROOKLYN
Bodoni Poster	BODNOFF
Brush Script	BANFF
Carta (Adobe™)	GEOGRAPHIC
Caslon	CASABLANCA
Caslon OpenFace	CASPER OPENFACE
Century Old Style	CENTURION OLD
Cooper Black	CUPERTINO
Cottonwood (Adobe™)	COTTAGE
Dom Casual	DAWN CASTLE
Eras (ITC™)	ERIE
Eras Black (ITC™)	ERIE BLACK
Eras Light (ITC™)	ERIE LIGHT
Fette Fraktur (ITC™)	FRANKENSTEIN
Franklin Gothic (ITC™)	FRANKFURT GOTHIC
Franklin Gothic Heavy (ITC™)	FRANKFURT GOTHIC HEAVY
Freestyle Script (Letraset™)	FREEPORT
Friz Quadrata (ITC™)	FRANCE
Futura Condensed (FTNSA™)	FUJIYAMA CONDENSED
Futura Condensed Extra Bold	FUJIYAMA CONDENSED EXTRA BOLD
Futura Condensed Light (FTNSA)	FUJIYAMA CONDENSED LIGHT
Futura 2 (FTNSA™)	FUJI2
Garamond (ITC™)	GATINEAU
Helvetica (Linotype™)	SWITZERLAND
Helvetica Black (Linotype™)	SWITZERLAND BLACK
Helvetica Light (Linotype™)	SWITZERLAND LIGHT
Helv. Cond. (Linotype™)	SWZ COND
Helv. Cond. Blk. (Linotype™)	SWZ COND BLK
Helv. Cond. Lgt. (Linotype™)	SWZ COND LGT

Trademarked name* COREL equivalent

Helvetica Inserat (Linotype™)	SWITZERLAND INSERAT
Helvetica Narrow (Linotype™)	SWITZERLAND NARROW
Hobo	HOMEBWARD BOUND
Ironwood (Adobe™)	IRELAND
Juniper (Adobe™)	JUPITER
Kaufmann (Kingsley/ATF™)	KOALA
Letter Gothic	MONOSPACED
Linoscript (Linotype™)	LINUS
Linotext (Linotype™)	LINCOLN
Machine (ITC™)	MOTOR
Mistral (M. Olive™)	MYSTICAL
New Baskerville (ITC™)	NEBRASKA
New Century Schoolbook	NEW BRUNSWICK
Optima (Linotype™)	OTTAWA
Palatino (Linotype™)	PALM SPRINGS
Parisian (Kingsley/ATF™)	PARAGON
Park Avenue (ATF Type™)	PARADISE
Peignot (Linotype™)	PENGUIN
Peignot Light (Linotype™)	PENGUIN LIGHT
Ponderosa (Adobe™)	POSSE
Post Antiqua (H. Berthold AG™)	PROSE ANTIQUE
Present Script (Linotype™)	PRESIDENT
Revue (Letraset™)	RENFREW
Sonata (Adobe™)	MUSICAL
Souvenir (ITC™)	SOUTHERN
Stencil	STAMP
Symbols	GREEK/MATH SYMBOLS
Tekton (Adobe™)	TECHNICAL
Tiffany (ITC™)	TIMPANI
Tiffany Heavy (ITC™)	TIMPANI HEAVY
Times (Linotype™)	TORONTO
Umbra (Kingsley/ATF™)	UMBRELLA
Univers Black (Linotype™)	USA BLACK
Univers Light (Linotype™)	USA LIGHT
University Roman (Letraset™)	UNICORN
VAG Rounded	VOGUE
Zapf Chancery (ITC™)	ZURICH CALLIGRAPHIC
Zapf Dingbats (ITC™)	DIXIELAND

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SYMBOL AND CLIPART LIBRARIES



CORELDRAW!



SYMBOL AND CLIPART LIBRARIES



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CorelDRAW Clipart and Symbol Library Reference Guide

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INTRODUCTION

The Corel logo consists of a stylized 'C' character enclosed within a circular path, with the word 'COREL' printed in a bold, sans-serif font to its right.

Welcome to the CorelDRAW Symbols & ClipArt Libraries. Inside, you'll find a unique collection of clipart images created by some of the best artists in the business — and for the first time, a vast assortment of Corel-created symbols. The libraries are a cooperative venture between Corel and 17 well-known commercial clipart suppliers. As with our clipart samplers of the past, we expect this catalog to be an invaluable tool for our users.

We wish to take this opportunity to thank each of the clipart vendors who participated by donating the selected images you'll find in the next section. Without their efforts, this catalog would not be possible.

Please note that due to a file size restriction Corel placed on the submissions of the participating vendors, they have provided us with some of their smaller samples. The images you are receiving with your CorelDRAW should be used as an indication of the style of each vendor, rather than as a fully accurate measure of what the vendors can offer. For your information, many vendors have several volumes of specialty artwork available, covering a wide assortment of topics. That gives you access to literally thousands of clipart images! All of the images enclosed are in .CDR format, but many of the clipart vendors provide images in other formats such as .EPS, .CGM, etc. Please consult individual vendors for details. (You'll find a wealth of information in the section entitled SOURCES).

This book is divided into two major sections — the first, highlighting the CLIPART and the second, overviewing the SYMBOLS. Each section is sorted by category, to allow you to quickly locate the type of image that interests you. We are proud to inform you that the clipart has been archived using Mosaic — offering a unique visual reference for each category. From all of us at Corel... we hope you enjoy using the CorelDRAW Symbols & ClipArt Libraries.



CLIP ART

On the following pages, you will find a selection of over 750 clipart images covering a wide range of styles and topics. We offer these images to you, our users, as a starting point for your creative efforts. We hope you enjoy using the samples, and encourage you to contact the clipart vendors listed in our SOURCES section to obtain a full assortment of quality clipart.

The clipart images profiled in this catalog are organized by category — see the listing below — and are accessed through the Corel Mosaic program. At this point, we suggest you consult the Mosaic section of your CorelDRAW reference guide for operating instructions.

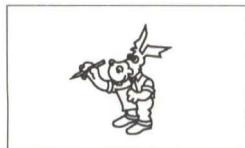
You'll find this library of clipart to be a wonderful tool — once you've accessed the clipart images, you may incorporate them into your own project or modify them to suit your needs. Clipart saves you both time and effort, with professional results.

Again, Corel would like to thank the clipart vendors for allowing us to display and distribute their excellent artwork.

ANIMALS
ARCHITECTURE
BUSINESS
ENVIRONMENT
FESTIVE
FLAGS
FOOD
INDUSTRY
MAPS
PEOPLE
SCIENCE
SPORTS
TECHNOLOGY
TRANSPORTATION

ANIMALS

COREL



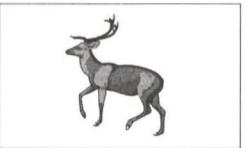
anidraw

—MGI



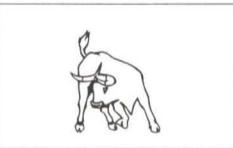
blackcat

TOTEM GRAPHICS



buck

Art
RIGHT



bull

creative collection
Butterfly



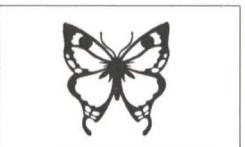
butter

ACEBO



butterf

TOTEM GRAPHICS



butterfly

BGF
GRAPHICS



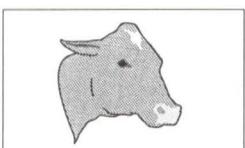
cgoose

TOTEM GRAPHICS



colt

TOTEM GRAPHICS



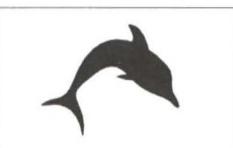
cowhead

TOTEM GRAPHICS



dog1

Fontage
ARTICLES



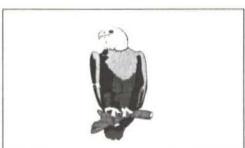
dolphin

ClickArt



duck

ClickArt



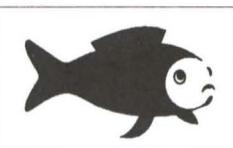
eagle1

Art
RIGHT



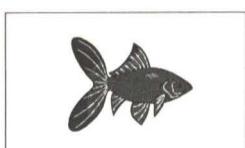
elephant

BGF
GRAPHICS



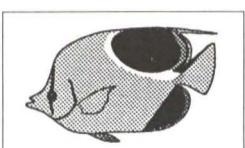
fish

ClickArt



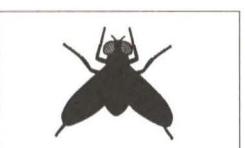
fish1

TOTEM GRAPHICS



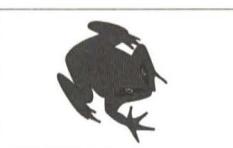
fish2

TOTEM GRAPHICS



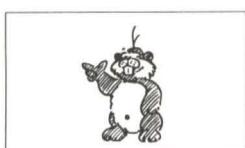
fly

TOTEM GRAPHICS



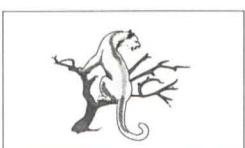
frog

TOTEM GRAPHICS



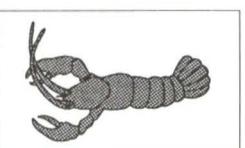
hamster

DIGITAL
ideen
archiv



lion2

Art
RIGHT



lobster

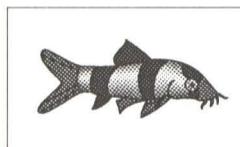
BGF
GRAPHICS



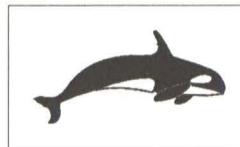
monkey

MAGE
CLUB

ANIMALS



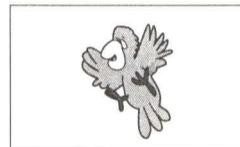
ofish

3G
GRAPHICS

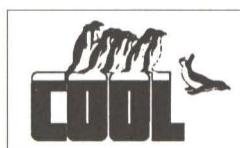
orca

3G
GRAPHICS

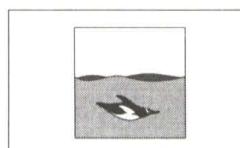
owl

creative collection
butterfly

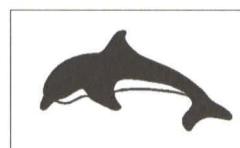
parrot

MAGE
CLUB

pengjump

IMAGE BANK
The New Art of Illustration

penguin

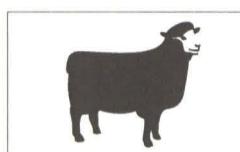
TOTEM
GRAPHICS

porpoise

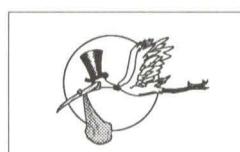
ARTWORKS



reindeer

TOTEM
GRAPHICS

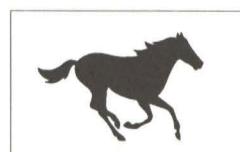
sheep

ClickArt

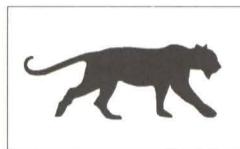
stork

MAGE
CLUB

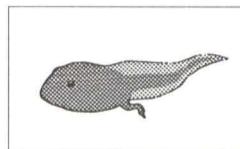
swan

ClickArt

symhorse

Presentation
TASK FORCE

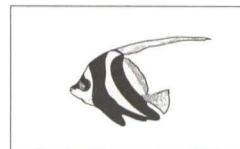
symlion

Presentation
TASK FORCE

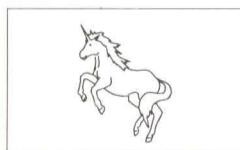
tadpole

TOTEM
GRAPHICS

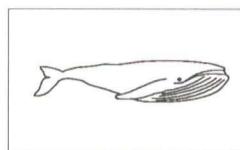
tropfish

3G
GRAPHICS

tropical

Art
RIGHT

unicorn

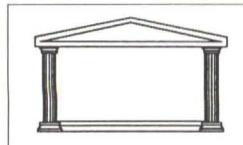
Stock
Image

whale

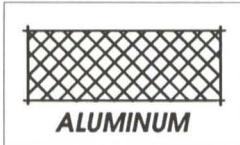
ACEBO

ARCHITECTURE

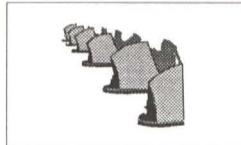
COREL



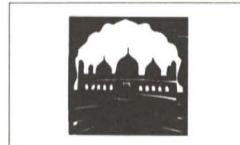
acrop ACE



aluminum Art RiGHT



barrier HAL Visual Presentation



bildng01 DIGITAL ideen archiv



bildng02 DIGITAL ideen archiv



bildng03 DIGITAL ideen archiv



bildng04 DIGITAL ideen archiv



bildng05 DIGITAL ideen archiv



bildng06 DIGITAL ideen archiv



bildng07 DIGITAL ideen archiv



bildng08 DIGITAL ideen archiv



bildng09 DIGITAL ideen archiv



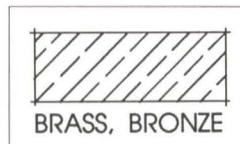
bildng10 DIGITAL ideen archiv



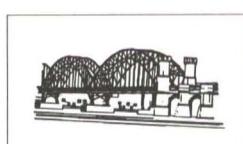
bildng11 DIGITAL ideen archiv



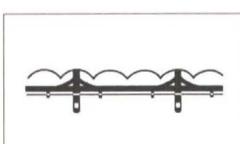
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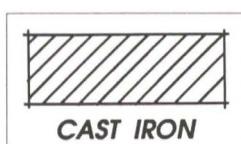
BRASS, BRONZE Art RiGHT



bridge creative collection Butterfly



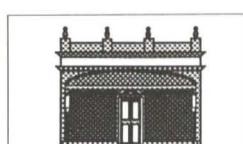
bridge2 3G GRAPHICS



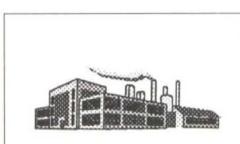
CAST IRON Art RiGHT



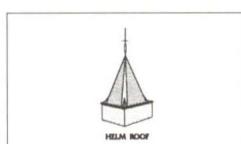
cottage MOONLIGHT ARTWORKS



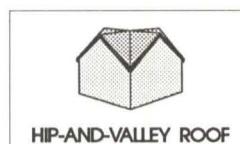
entrance MAGE CLUB



factory MAGE CLUB

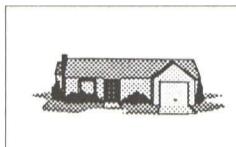


helmroof Art RiGHT



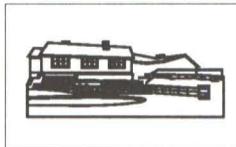
HIP-AND-VALLEY ROOF Art RiGHT

ARCHITECTURE



house

ColorArt
High quality artwork for desktop presentation and publishing



house2

MGI



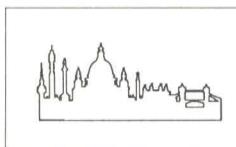
house3

HAL
Visual
Presentation



liberty

Gold Age
ARTWORKS



london

HAL
Visual
Presentation



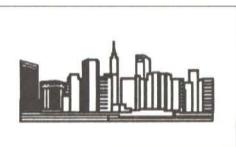
office

MGI



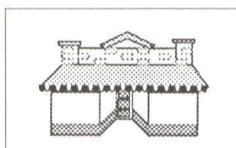
paris

HAL
Visual
Presentation



skyline

MGI



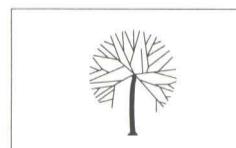
store

MAGE
ART



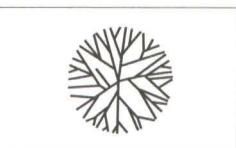
tree1

Art
RiGHT



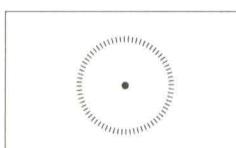
tree2

Art
RiGHT



tree3

Art
RiGHT



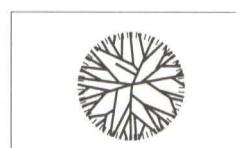
tree4

Art
RiGHT



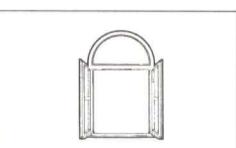
tree5

Art
RiGHT



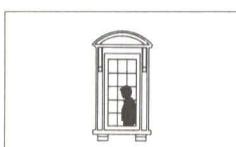
tree6

Art
RiGHT



window

creative collection
Butterfly



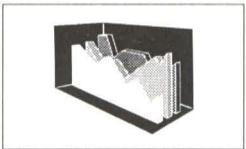
window2

MGI

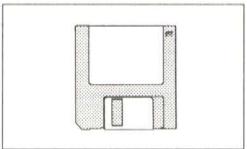
BUSINESS



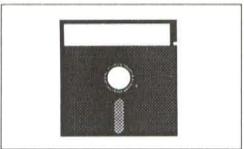
2women

**Presentation
TASK FORCE**

3-dgraph

**Art
RIGHT**

3disk

**3G
GRAPHICS**

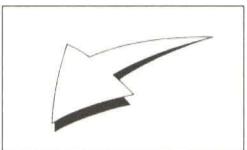
5disk

**3G
GRAPHICS**

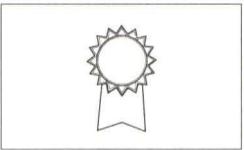
alarmclk

**Click
Art**

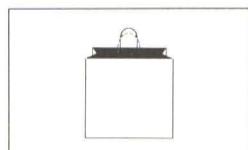
around

MGI

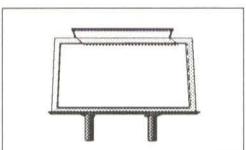
arrow

**Click
Art
PUBLISHING**

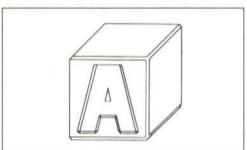
award

**MOONLIGHT
ARTWORKS**

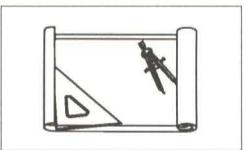
bag

ClickArt

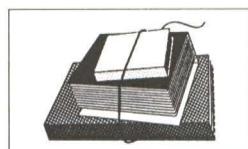
bilbord1

Colorware
High quality drivers for desktop publishing and printing

block

**MOONLIGHT
ARTWORKS**

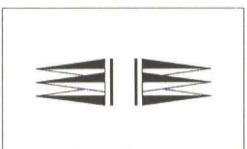
blueprint

MGI

books

ClickArt

bracket1

**3G
GRAPHICS**

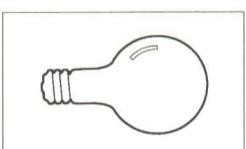
bracket2

**3G
GRAPHICS**

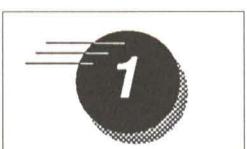
briefcas

**3G
GRAPHICS**

briefcs2

**Art
RIGHT**

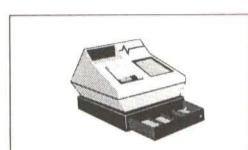
bulb

**MOONLIGHT
ARTWORKS**

bullet1

ClickArt

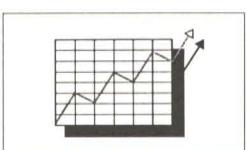
cards

**WAGE
CLUB**

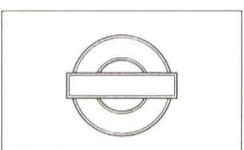
cash2

**Art
RIGHT**

chair

ClickArt

chart

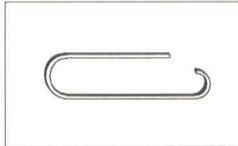
ClickArt

circbar

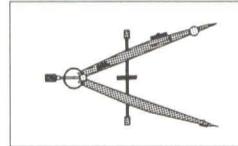
**MOONLIGHT
ARTWORKS**



clapboard

BG
GRAPHICS

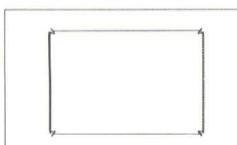
clip

ClickArt

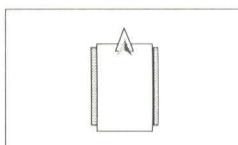
compass

COREL

crayon

BG
GRAPHICS

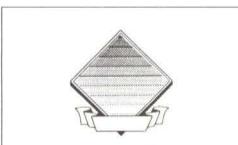
decohbox

BG
GRAPHICS

decotile

BG
GRAPHICS

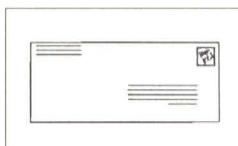
desk

MAGE
CLUB

diamond

MOONLIGHT
ARTWORKS

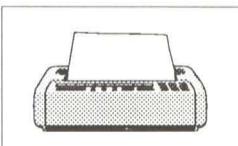
diamond2

BG
GRAPHICS

envelope

BG
GRAPHICS

exclaim

BG
GRAPHICS

fax

ClickArt

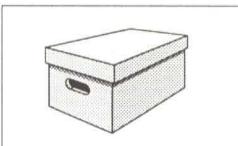
femphon2

Presentation
TASK FORCE

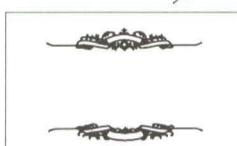
femphon3

Presentation
TASK FORCE

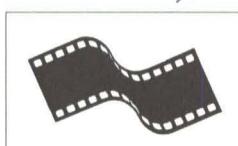
femthink

Presentation
TASK FORCE

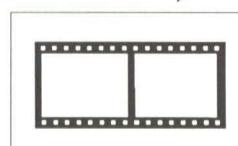
filebox

MAGE
CLUB

filigree

MGI

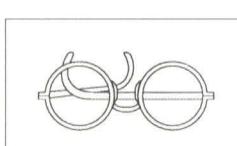
filmstp2

MOONLIGHT
ARTWORKS

filmstrp

HAL
Visual
Presentation

frame

BG
GRAPHICS

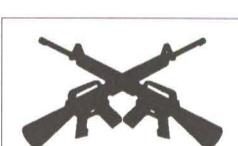
glasses

BG
GRAPHICS

gradcap

BG
GRAPHICS

greeting2

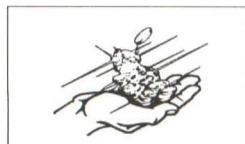
Presentation
TASK FORCE

guns

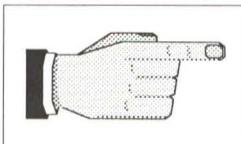
MGI

BUSINESS

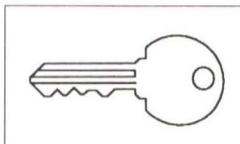
COREL



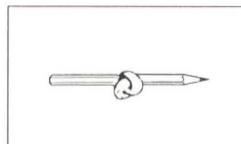
hand\$ creative collection Butterfly



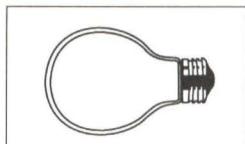
handr Colorati



key ARTWORKS



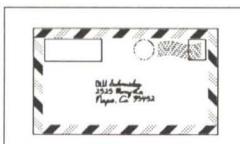
knotpenc creative collection Butterfly



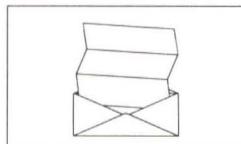
litebulb —MGI



mad Presentation TASK FORCE



mail1 3G GRAPHICS



mail2 3G GRAPHICS



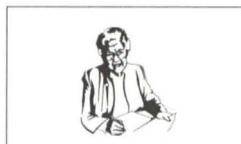
manphon3 Presentation TASK FORCE



manphon4 Presentation TASK FORCE



manphone Presentation TASK FORCE



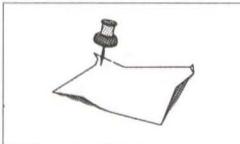
maturef Presentation TASK FORCE



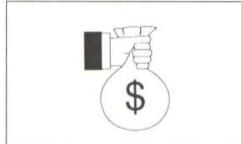
meeting2 Presentation TASK FORCE



megaphon ClickArt



memo MAGE CLUB



money 3G GRAPHICS



money2 Presentation TASK FORCE



money3 Presentation TASK FORCE



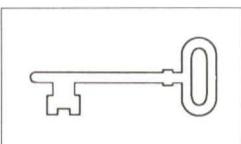
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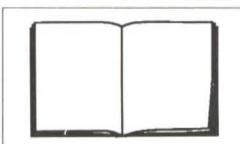
newspapr MAGE CLUB



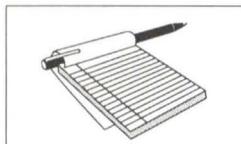
notepad 3G GRAPHICS



oldkey ARTWORKS

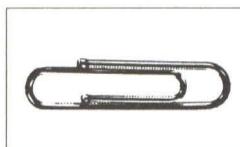


openbook —MGI



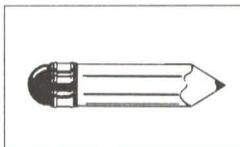
pad&pen 3G GRAPHICS

BUSINESS



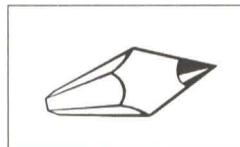
papclip

creative collection
Butterfly



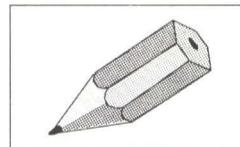
pencil

3G
Graphics



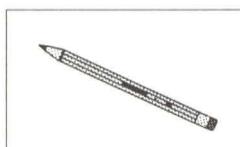
pencil2

creative collection
Butterfly



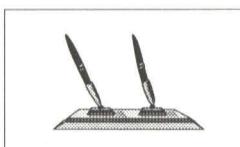
pencil3

Colorarti
high quality icons for desktop presentation and publishing



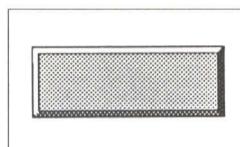
pencilup

COREL



penset

Colorarti
high quality icons for desktop presentation and publishing



plaque

ARTWORKS



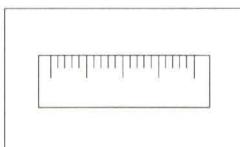
question

3G
Graphics



ribbon

ClickArt



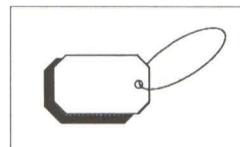
ruler

3G
Graphics



sales

ClickArt



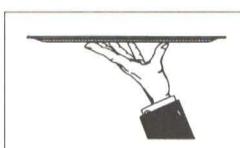
salestag

ClickArt



scales

MGI



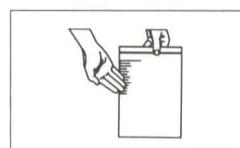
serving

3G
Graphics



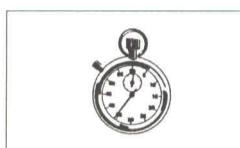
shades

ClickArt



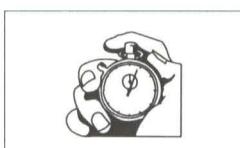
signnow

MGI



stopwch

3G
Graphics



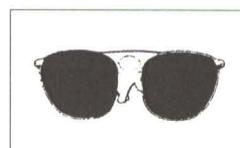
stpwatch

MGI



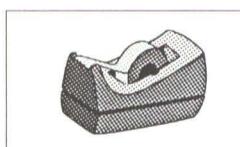
suitcase

3G
Graphics



sunglass

**DIGITAL
ideen
archiv**



tape

ClickArt



toon05

**Presentation
TASK FORCE**



toon06

**Presentation
TASK FORCE**



toon07

**Presentation
TASK FORCE**

BUSINESS

COREL



toon08

Presentation
TASK FORCE



toon10

Presentation
TASK FORCE



toon11

Presentation
TASK FORCE



toon12

Presentation
TASK FORCE



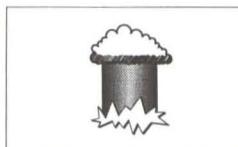
tugofwar

—**MGI**

upgrid

 **Art
RIGHT**

ENVIRONMENT



atblast

MAGE
ART

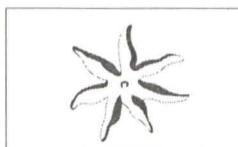
beach1

BG
GRAPHICS

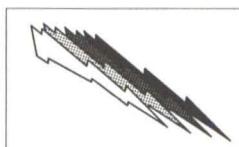
beach2

BG
GRAPHICS

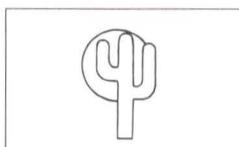
beach3

BG
GRAPHICS

beach4

BG
GRAPHICS

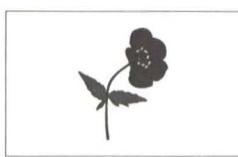
bolts

ClickArt

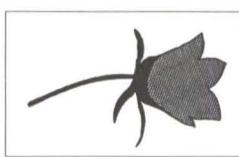
cactus

Totem
GRAPHICS

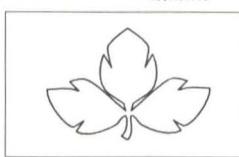
daisy

Colorari
high quality art for desktop presentation and publishing

flower1

TOTEM
GRAPHICS

flower2

TOTEM
GRAPHICS

leaf

ARTWORKS

lighting

HAL
Visual
Presentation

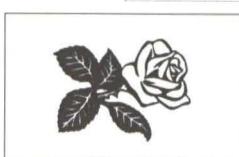
lily

MOONLIGHT
ARTWORKS

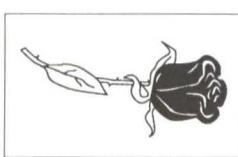
palm

Colorari
high quality art for desktop presentation and publishing

palmtree

ClickArt

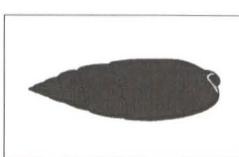
rose

creativity collection
Butterfly

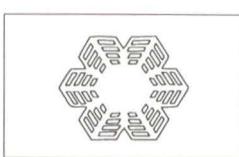
rose2

BG
GRAPHICS

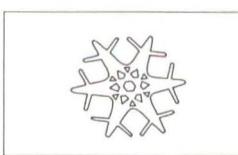
shell

ClickArt

shell2

TOTEM
GRAPHICS

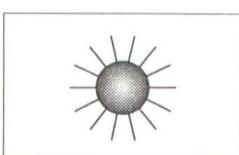
snow1

SGA
GRAPHICS

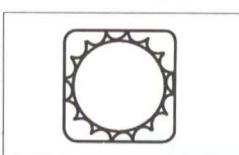
snow2

Totem
GRAPHICS

starfish

TOTEM
GRAPHICS

sun

HAL
Visual
Presentation

sun1

ARTWORKS

ENVIRONMENT

COREL



sun2

ARTWORKS



sun3

ARTWORKS



sun4

ARTWORKS



sun5

creative collection
Butterfly



sundrip

DIGITAL
ideen
Archiv



suneat

DIGITAL
ideen
Archiv



thistle

3G
GRAPHICS



tree

Presentation
TASK FORCE



tropic

MAGE
ART

FESTIVE

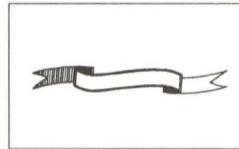


angel

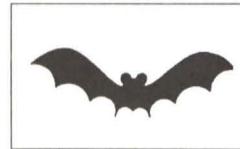
ARTWORKS



angel2

BG
GRAPHICS

banner

BG
GRAPHICS

bat

BG
GRAPHICS

bircake

BG
GRAPHICS

bugles

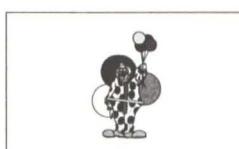
IMAGE
PAINT

candles

ARTWORKS



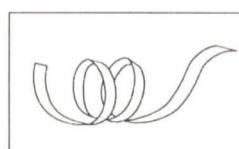
cherub

MOONLIGHT
ARTWORKS

clown

IMAGE
CLUB

clown2

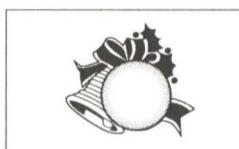
Art
RIGHT

confetti

MOONLIGHT
ARTWORKS

ctree

ARTWORKS



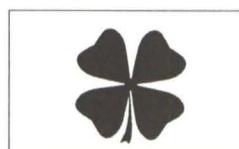
decor

ARTWORKS



ding1

ClickArt



ding3

ClickArt

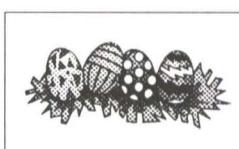


dove

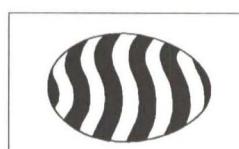
MGI



dove2

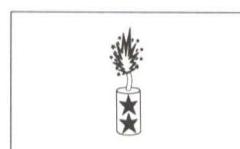
BG
GRAPHICS

easteggs

IMAGE
CLUB

egg

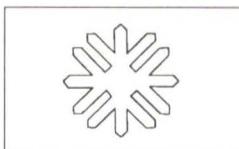
ARTWORKS



firecr2

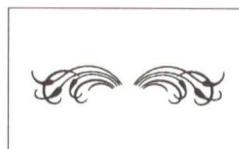
MOONLIGHT
ARTWORKS

firecrkr

MOONLIGHT
ARTWORKS

flake

ClickArt



flourish

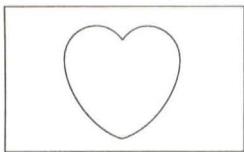
BG
GRAPHICS

ghost

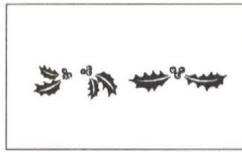
BG
GRAPHICS

FESTIVE

COREL



heart ARTWORKS



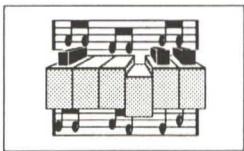
holly 3G GRAPHICS



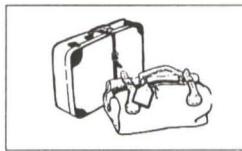
horn ClickArt



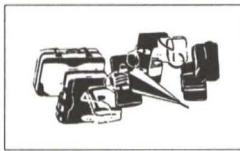
jacko ARTWORKS



keyboard MAGE CLUB



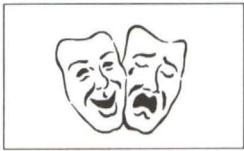
luggage1 DIGITAL ideen archiv



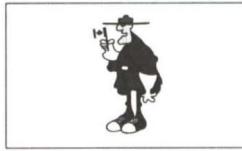
luggage2 DIGITAL ideen archiv



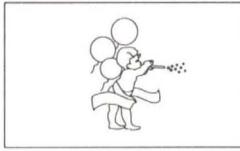
mardigras IMAGE BANK



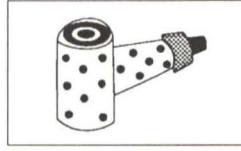
masks Presentation TASK FORCE



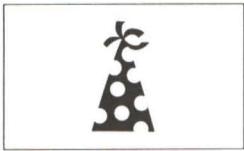
mountie Art RIGHT



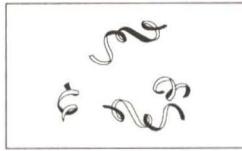
newyr ARTWORKS



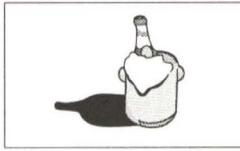
partyfav 3G GRAPHICS



partyhat 3G GRAPHICS



partyrbn 3G GRAPHICS



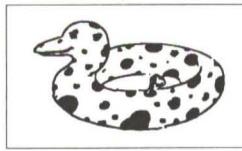
pop Art RIGHT



present 3G GRAPHICS



pumpkin TOTEM GRAPHICS



rubduck DIGITAL ideen archiv



santa ARTWORKS



santa2 3G GRAPHICS



santa3 creative collection Butterfly



shmrock MOONLIGHT ARTWORKS



shoppers MOONLIGHT ARTWORKS



snowman TOTEM GRAPHICS

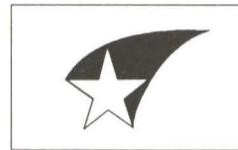


ssled

ARTWORKS

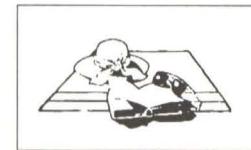


star

Sonic
Age

star2

ClickArt



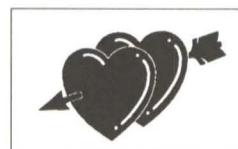
sunmat

DIGITAL
ideen
archiv

tophat

Sonic
Age

unclesam

Art
RIGHT

valen

MOONLIGHT
ARTWORKS

wedding

MAGE
club

wizard

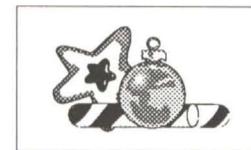
IMAGE
BANK

womcake

creative
collection
Butterfly

wreath

ARTWORKS



xmas

MAGE
club

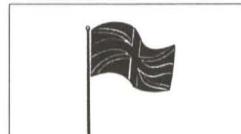
FLAGS



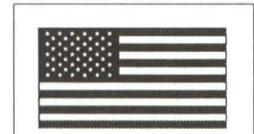
canada high quality images for desktop presentation and publishing



chkflag



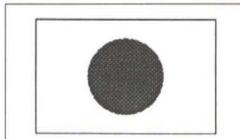
england high quality images for desktop presentation and publishing



flags1



flags2



flags3



flags4



flags5



flags6



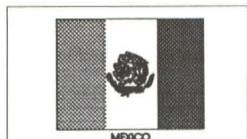
flags7



france high quality images for desktop presentation and publishing



japan high quality images for desktop presentation and publishing



mexico



sign1



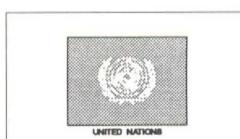
skullx



spain



symbol3



un



unflag



usapres



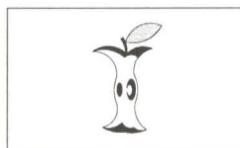
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ussr high quality images for desktop presentation and publishing



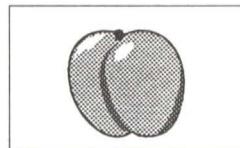
wgermany high quality images for desktop presentation and publishing



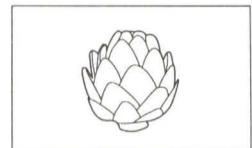
applecore

**Presentation
TASK FORCE**

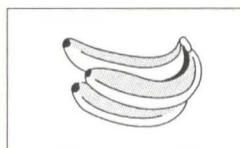
apple

**Art
RIGHT**

apricot

**Art
RIGHT**

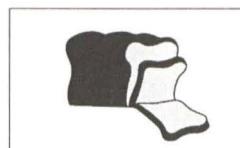
arti

ARTWORKS

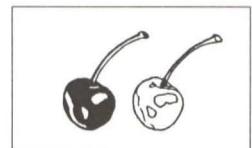
bananas

**3G
GRAPHICS**

beermug

ClickArt

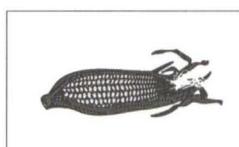
bread

**3G
GRAPHICS**

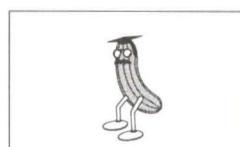
cherries

**3G
GRAPHICS**

cherry2

ClickArt

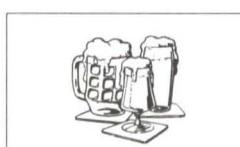
corn

**Art
RIGHT**

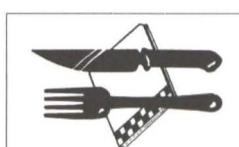
cumber

ACEBO

dining

**3G
GRAPHICS**

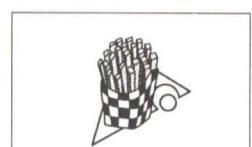
drinks

**creative collection
Butterfly**

forknf

IMAGE BASE

friedegg

**IMAGE
CLUB**

frnchfry

**3G
GRAPHICS**

glass

**creative collection
Butterfly**

grocery

**Presentation
TASK FORCE**

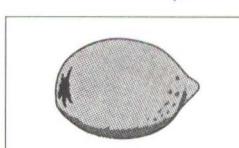
hamburgr

**3G
GRAPHICS**

icedrink

**3G
GRAPHICS**

kettle

**3G
GRAPHICS**

lemon

**TOTEM
GRAPHICS**

martini

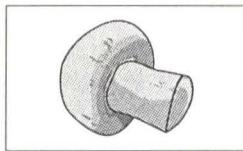
**3G
GRAPHICS**

menu

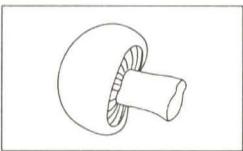
**IMAGE
BASE**



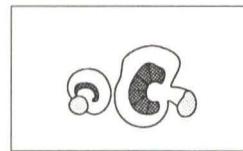
milk



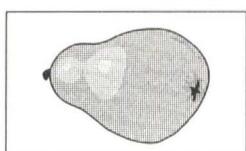
mushrom2



mushrom3



mushroom



pear



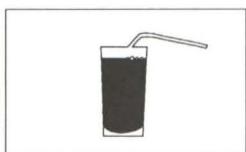
picnic



serve



sixpack



softdrnk



wglass



wine



wine2



winebot

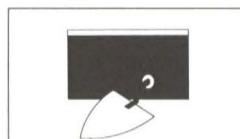


wineglas

INDUSTRIAL



asmbly

**Presentation
TASK FORCE**

brickwl

**Presentation
TASK FORCE**

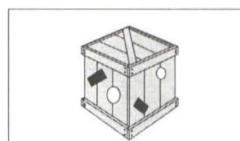
burn1

**Art
RIGHT**

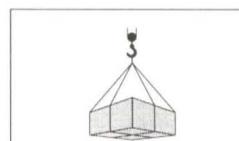
burn2

**Art
RIGHT**

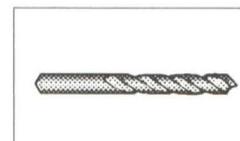
chisel

**TOTEM
GRAPHICS**

crate

**Presentation
TASK FORCE**

crate2

**Presentation
TASK FORCE**

drill

**TOTEM
GRAPHICS**

dumpster

**creative collection
Butterfly**

dumpruk

**Art
RIGHT**

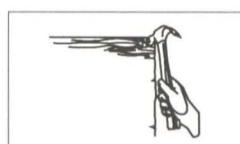
explode

**Art
RIGHT**

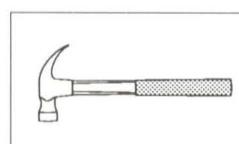
gear

**creative collection
Butterfly**

gears

**Presentation
TASK FORCE**

hammer

MGI

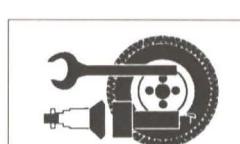
hammer2

ACEBO

hotstuff

**Art
RIGHT**

ladder

**MAGE
CLUB**

mechsymb

**MAGE
CLUB**

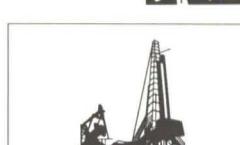
noflame

**Art
RIGHT**

nosmoke

**Art
RIGHT**

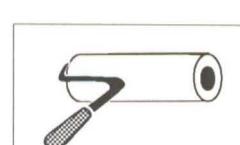
nuclear

**Art
RIGHT**

oilrig

**MAGE
CLUB**

paintbkt

**3G
GRAPHICS**

paintrol

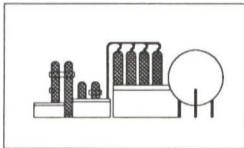
**3G
GRAPHICS**

INDUSTRIAL

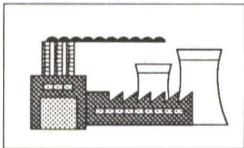
COREL



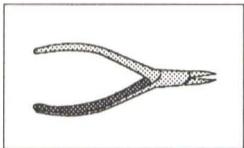
plant



plant1



plant2



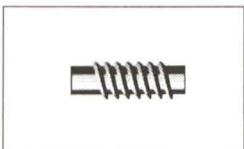
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restrict



signpost



thread



welder



xcavator

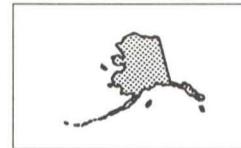




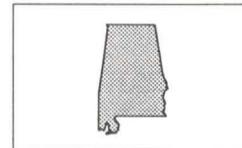
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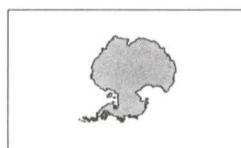
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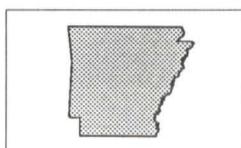
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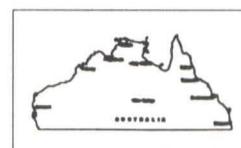
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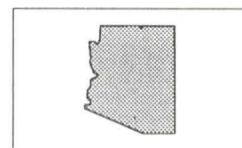
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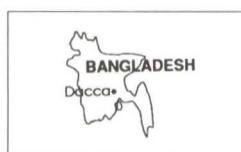
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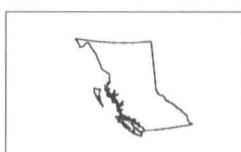
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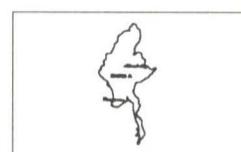
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banglad



bc



burma



ca



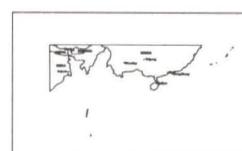
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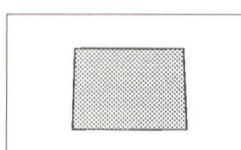
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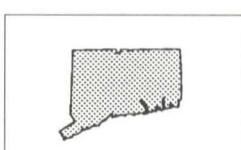
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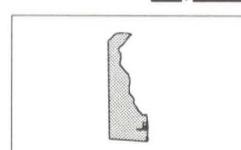
china2



co



ct



de



eurbel



eurger



eurgre



europe



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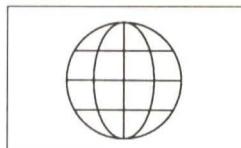




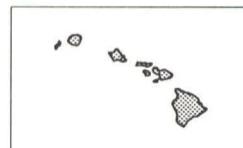
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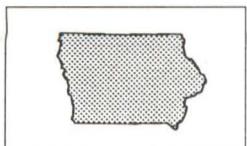
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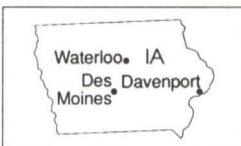
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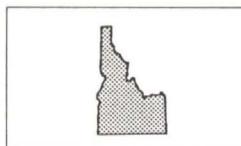
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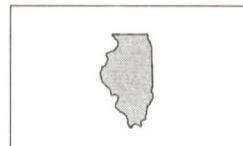
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id



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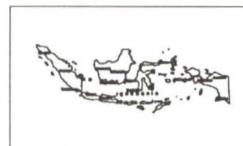
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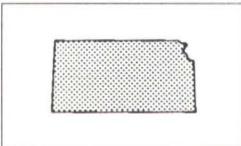
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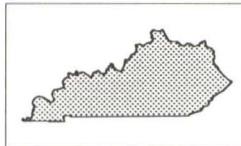
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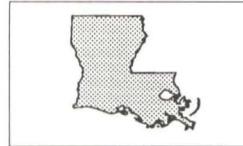
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ks



ky



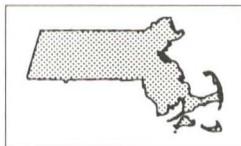
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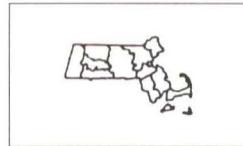
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laos



ma



ma2



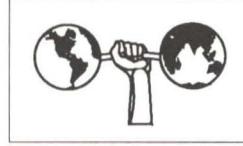
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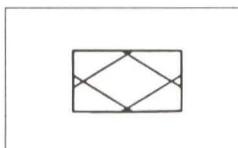
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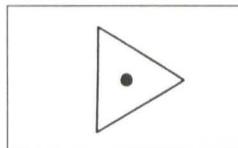
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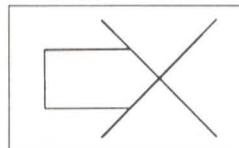
maplift



mapsym01

HAL
Visual
Presentation

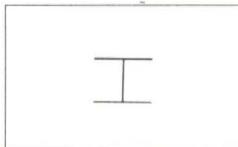
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HAL
Visual
Presentation

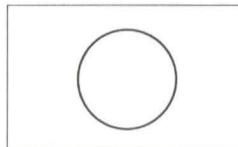
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HAL
Visual
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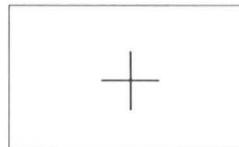
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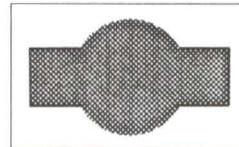
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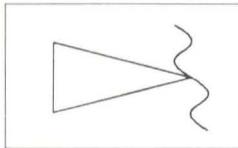
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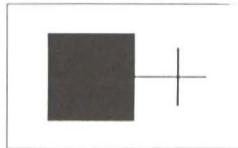
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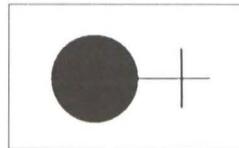
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Visual
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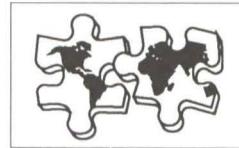
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HAL
Visual
Presentation

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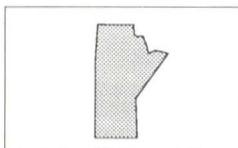
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Visual
Presentation

mapsym11

HAL
Visual
Presentation

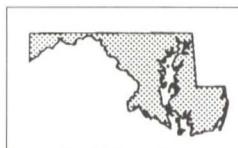
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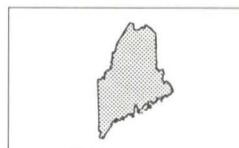
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COREL



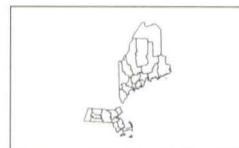
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COREL



me

COREL



me2

MicroMaps



mi

COREL



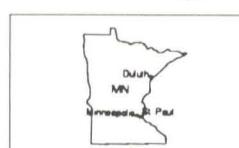
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MicroMaps



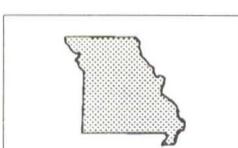
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COREL



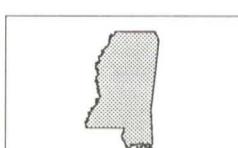
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MicroMaps



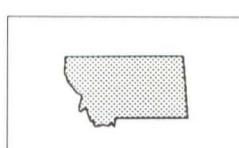
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COREL



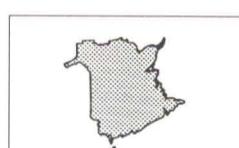
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COREL



mt

COREL

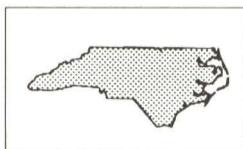


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COREL

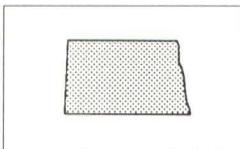
MAPS

COREL



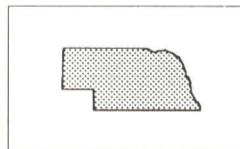
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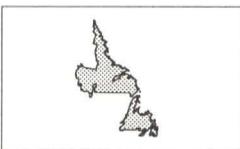
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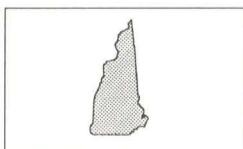
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COREL



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COREL



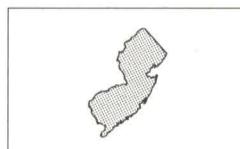
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COREL



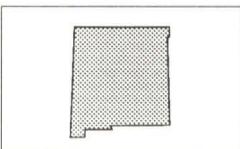
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MicroMaps



nj

COREL



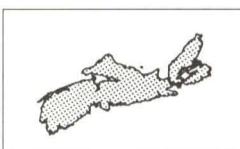
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COREL



north

Colorware
high quality software for desktop presentation and publishing



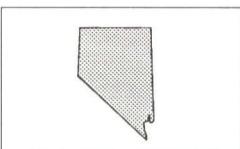
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COREL



nt

COREL



nv

COREL



ny

COREL



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COREL



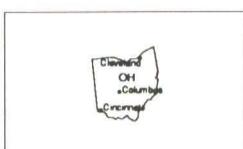
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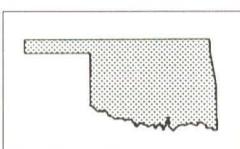
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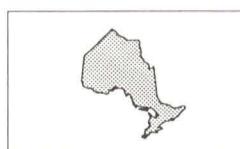
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MicroMaps



ok

COREL



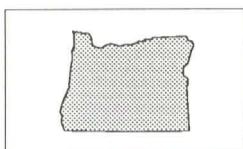
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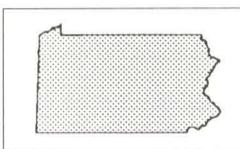
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MicroMaps



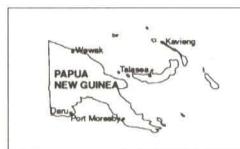
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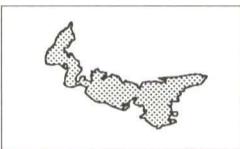
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COREL



papuang

MicroMaps



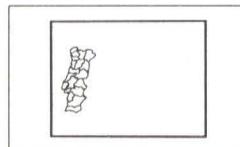
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COREL

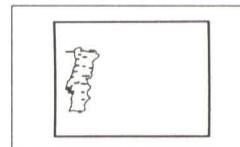
MAPS



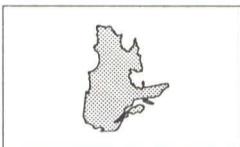
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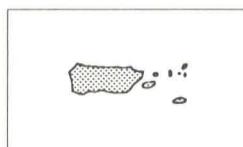
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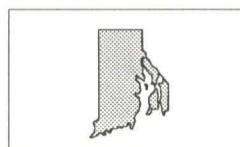
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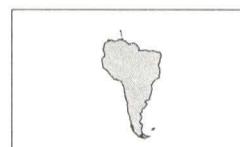
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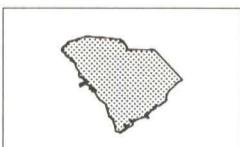
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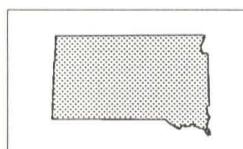
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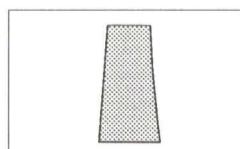
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sd



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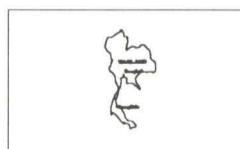
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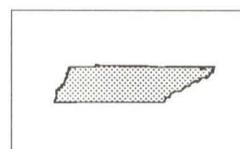
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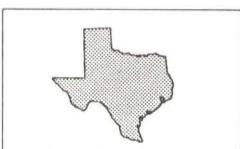
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thailand



tn



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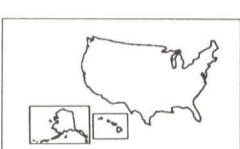
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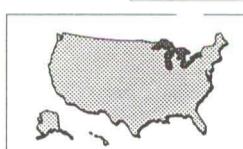
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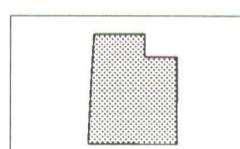
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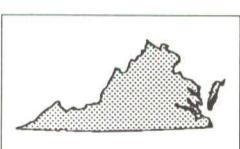
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ussr



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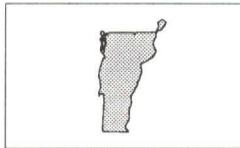
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MAPS



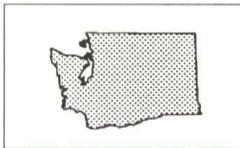
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vt



vt2



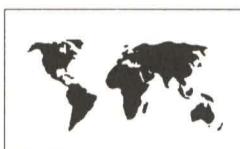
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wi



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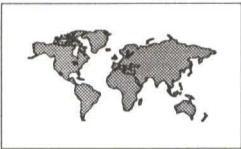


world

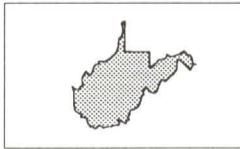
HAL
Visual
Presentation



world1



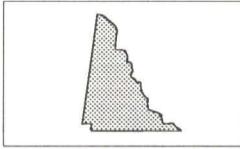
world2



wv



wy



yt



PEOPLE



2men

ARTWORKS



2women

ARTWORKS



argue

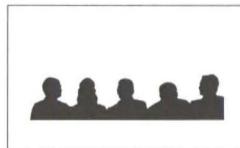
—MGI—



army1

Presentation
TASK FORCE

army2

Presentation
TASK FORCE

audience

3G
GRAPHICS

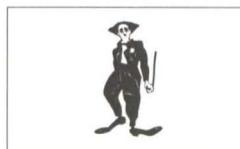
auswomen

TOTEM
GRAPHICS

bhutto

ACEBO

busman

COREL

chaplin

IMAGE
CLUB

chef

creative collection
Butterfly

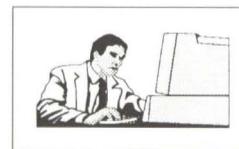
chefman

COREL

child

COREL

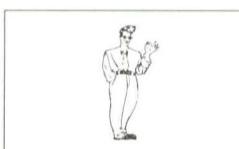
cointoss

Presentation
TASK FORCE

compman1

Art
RIGHT

construc

COREL

coolman

creative collection
Butterfly

coolwom

creative collection
Butterfly

couple

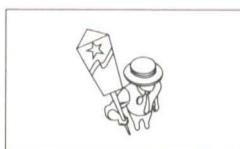
3G
GRAPHICS

crowd

—MGI—



dance2

COREL

delegate

—MGI—



delivery

creative collection
Butterfly

devilwom

TOTEM
GRAPHICS

PEOPLE

COREL



dudeman

COREL



family

3G GRAPHICS



feetup

**DIGITAL
ideen
archiv**



fixing

**Art
RIGHT**



flagger

MGI



girlfot

**DIGITAL
ideen
archiv**



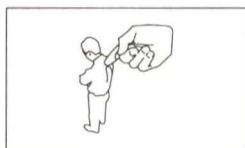
greeting

**Presentation
TASK FORCE**



group

MGI



guilty

MGI



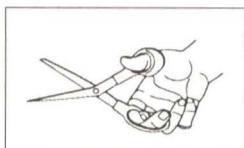
hands

**Presentation
TASK FORCE**



hands&\$

**Presentation
TASK FORCE**



hands01

ACEBO



hands02

ACEBO



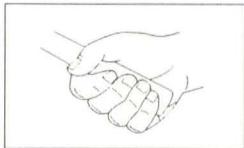
hands03

ACEBO



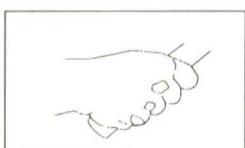
hands04

ACEBO



hands05

ACEBO



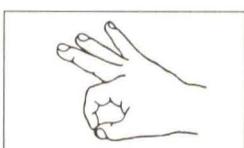
hands06

ACEBO



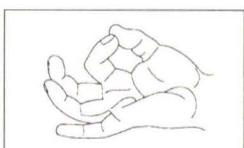
hands07

ACEBO



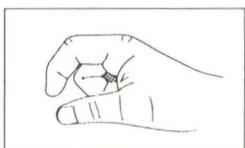
hands08

ACEBO



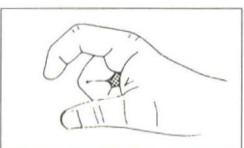
hands09

ACEBO



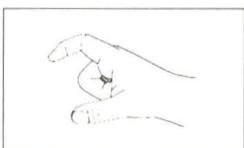
hands10

ACEBO



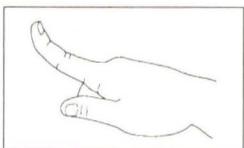
hands11

ACEBO



hands12

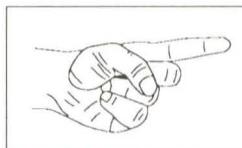
ACEBO



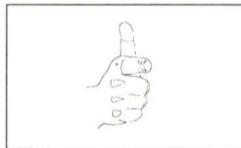
hands13

ACEBO

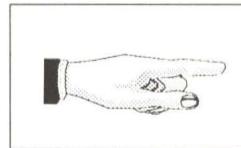
PEOPLE



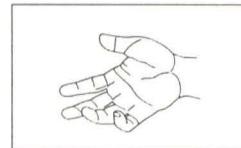
hands14

ACEBO

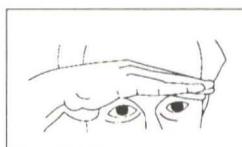
hands15

ACEBO

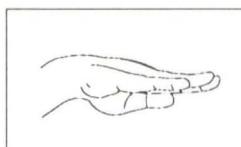
hands16

ACEBO

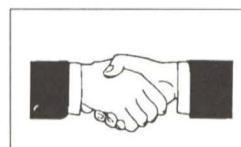
hands17

ACEBO

hands18

ACEBO

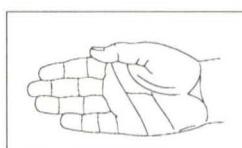
hands19

ACEBO

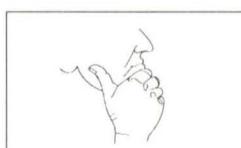
hands20

ACEBO

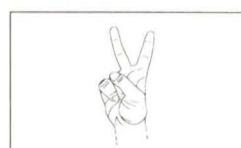
hands21

ACEBO

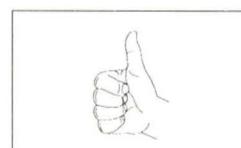
hands22

ACEBO

hands23

ACEBO

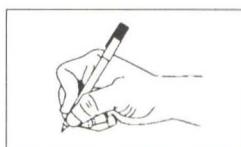
hands24

ACEBO

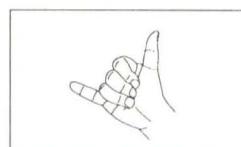
hands25

ACEBO

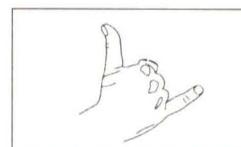
hands26

ACEBO

hands27

ACEBO

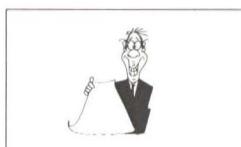
hands28

ACEBO

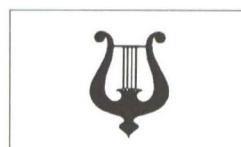
hands29

ACEBO

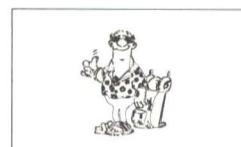
handshake

**Presentation
TASK FORCE**

happyguy

**MAGE
CLUB**

harp

**3G
GRAPHICS**

hitcher

**DIGITAL
ideen
archiv**

ike

ACEBO

indira

ACEBO

jumper

COREL

liftbabe

COREL

PEOPLE

COREL



lips

Self Age
ARTSTOCK



manface

creative collection
Butterfly



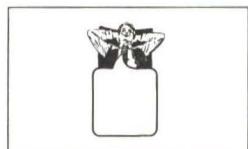
manfly

DIGITAL
ideen
archiv



manphone

ClickArt



manspeak

creative collection
Butterfly



mantall

3G
GRAPHICS



mantan

DIGITAL
ideen
archiv



mantub

DIGITAL
ideen
archiv



manwalk

DIGITAL
ideen
archiv



manwalk2

3G
GRAPHICS



mimleap

3G
GRAPHICS



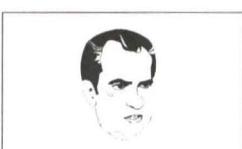
modelwom

TOTEM
GRAPHICS



musician

IMAGE
CLUB



nixon

ACEBO



opendoor

MGI



people

3G
GRAPHICS



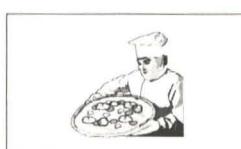
peoples

IMAGE
PANE



phonefem

Art
RIGHT



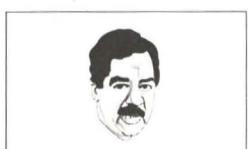
pizzaman

Art
RIGHT



police

HAL
Visual
Presentation



saddam

ACEBO



sailor

MGI



sitalk

IMAGE
PANE



sitspeak

MGI

PEOPLE



smiley

DIGITAL
ideen
ARCHIV

soldier

Presentation
TASK FORCE

speaker

—MGI—



stalin

ACEBO



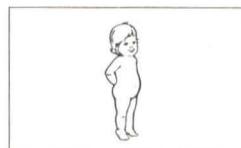
string

Presentation
TASK FORCE

sunburn

DIGITAL
ideen
ARCHIV

suntan

IMAGE BANK
The Fine Art of Photography

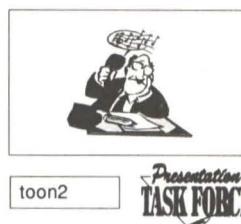
toddler

creative collection
Butterfly

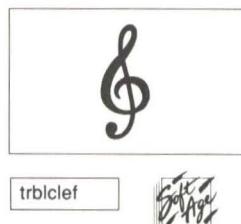
toon

Presentation
TASK FORCE

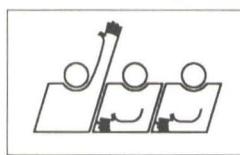
toon03

Presentation
TASK FORCE

toon2

Presentation
TASK FORCE

trblclef

SAC
SAC

vote

—MGI—



waiter

IMAGE BANK
The Fine Art of Photography

womface

creative collection
Butterfly

womfone

IMAGE BANK
The Fine Art of Photography

womhold

creative collection
Butterfly

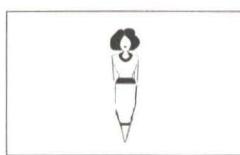
womsing

SAC
SAC

womsip

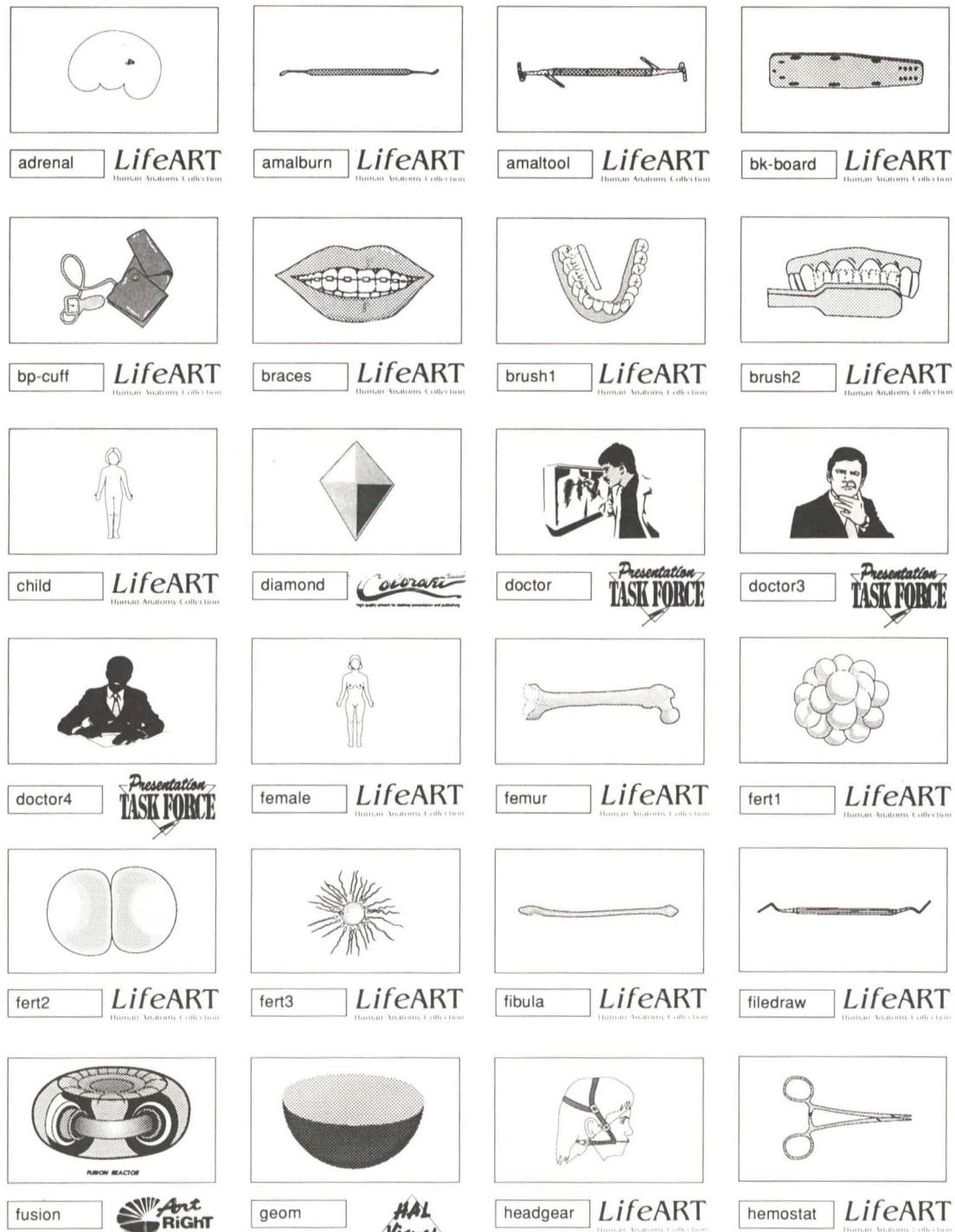
DIGITAL
ideen
ARCHIV

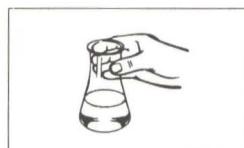
womsun

IMAGE BANK
The Fine Art of Photography

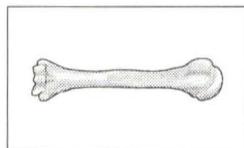
womtall

BGF
GRAPHICS





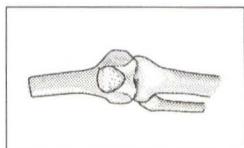
holdvial

creativ
collection


humerus

LifeART
Human Anatomy Collection

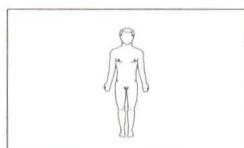

incisors

LifeART
Human Anatomy Collection


knee

LifeART
Human Anatomy Collection


labwork

Presentation
TASK FORCE


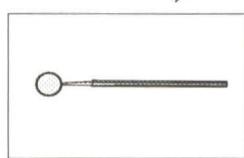
male

LifeART
Human Anatomy Collection

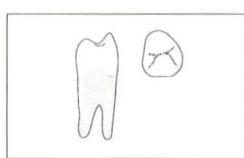

medical



microsco



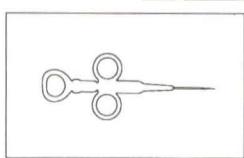
mirror

LifeART
Human Anatomy Collection


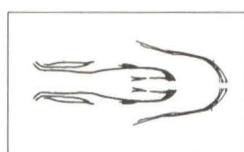
molar

LifeART
Human Anatomy Collection


needhold

LifeART
Human Anatomy Collection


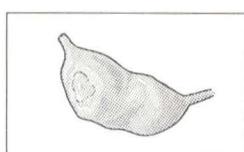
needle



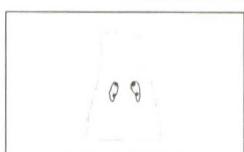
nerves

LifeART
Human Anatomy Collection

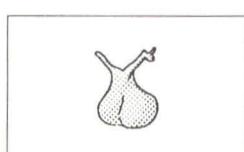

nurse

Presentation
TASK FORCE


ovary

LifeART
Human Anatomy Collection


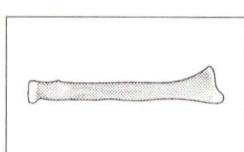
parathy

LifeART
Human Anatomy Collection


pituitar

LifeART
Human Anatomy Collection


prescript

Presentation
TASK FORCE


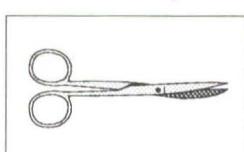
radius

LifeART
Human Anatomy Collection

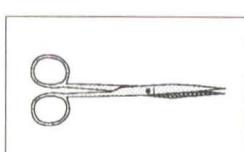

retract

LifeART
Human Anatomy Collection


scintest

Art
RIGHT


scissor1

LifeART
Human Anatomy Collection


scissor2

LifeART
Human Anatomy Collection


shape2

HAL
Visual
Presentation

SCIENCE

COREL



shape3

HAL
Visual
Presentation



skull

Presentation
TASK FORCE



sphere

ACEDO



stethscp

IMAGE
CLUB



teethdwn

LifeART

Human Anatomy Collection



teethup

LifeART

Human Anatomy Collection



thyroid

LifeART

Human Anatomy Collection



tibia

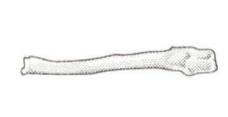
LifeART

Human Anatomy Collection



tubel

Art
RiGHT



ulna

LifeART

Human Anatomy Collection



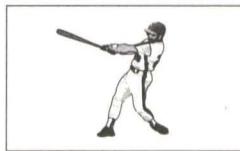
weight

ACEDO

SPORTS



balls

Soft Art
GIFTS

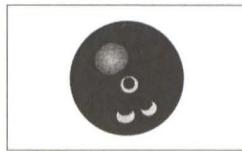
basebat

Art
RIGHT

biker

Art
RIGHT

bowling

Soft Art
GIFTS

bowling2

TOTEM GRAPHICS



champ

TOTEM GRAPHICS



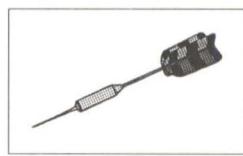
climb1

DIGITAL
ideen
archiv

climb2

DIGITAL
ideen
archiv

cyclist

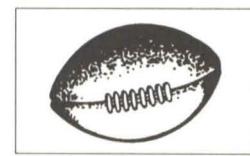
IMAGE BASE
The Best Art & Photo Collection

dart

TOTEM GRAPHICS



fishing

DIGITAL
ideen
archiv

football

creative collection
Butterfly

ftbalrun

Art
RIGHT

fumblers

IMAGE BASE
The Best Art & Photo Collection

golfer

IMAGE
CLUB

helmet

BG
GRAPHICS

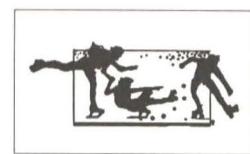
hockey

IMAGE
CLUB

kite

ColorArte
high quality art for digital presentation and printing

rafting

Art
RIGHT

skaters

IMAGE BASE
The Best Art & Photo Collection

runner

MGI



runshoe

BG
GRAPHICS

skier

Art
RIGHT

snorkel

MGI

SPORTS

COREL



spiker



surfer



ten-raq



tennies



trophy



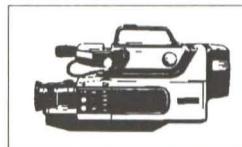
trophy2



womgym



TECHNOLOGY



camcordr

*3G
GRAPHICS*



cassette

*3G
GRAPHICS*



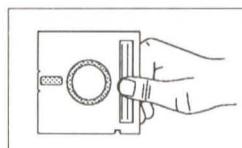
compu

*creative collection
Butterfly*



disc

*Presentation
TASK FORCE*



disk

ACEBO



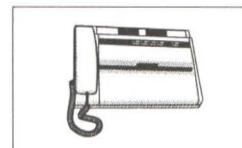
diskshad

*MOONLIGHT
ARTWORKS*



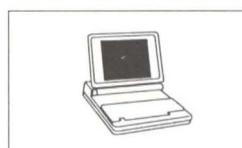
dsdrive2

**Art
RIGHT**



fax2

**Art
RIGHT**



laptop

*3G
GRAPHICS*



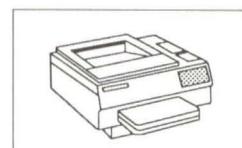
laptop01

**Art
RIGHT**



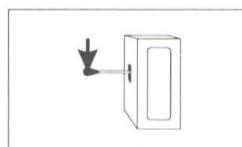
laser03

**Art
RIGHT**



laserjet

*3G
GRAPHICS*



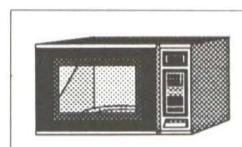
lever

ACEBO



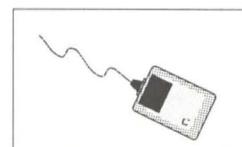
mac

*Presentation
TASK FORCE*



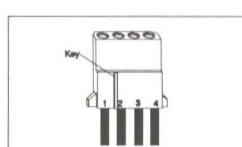
microwav

*IMAGE
CLUB*



mouse

*MOONLIGHT
ARTWORKS*



pconnect

ACEBO



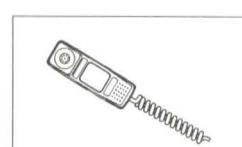
phone

*3G
GRAPHICS*



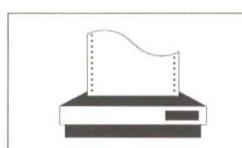
phonea

*MOONLIGHT
ARTWORKS*



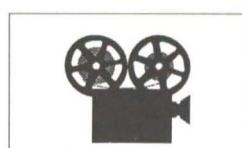
phoneb

*MOONLIGHT
ARTWORKS*



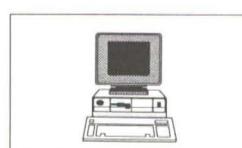
printer

*Presentation
TASK FORCE*



projectr

*3G
GRAPHICS*



ps2cpu

*3G
GRAPHICS*



ps2mnitor

Colorara
High quality software for making presentation and advertising

TECHNOLOGY

COREL



records



rom

ACEBO



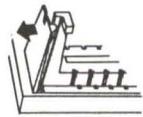
satelite



screen



ACEBO



simmcls

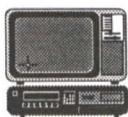
ACEBO



teldial



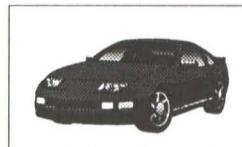
creative collection
Butterfly



videop



TRANSPORTATION



300zx

**Art
RiGHT**



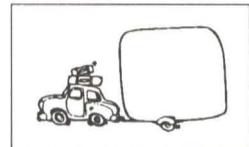
atlantis

**Art
RiGHT**



car

**HAL
Visual
Presentation**



carpull

**DIGITAL
ideen
archiv**



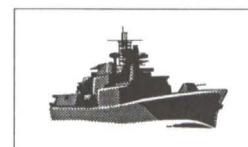
carrack

**DIGITAL
ideen
archiv**



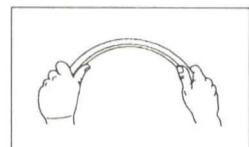
carride

**DIGITAL
ideen
archiv**



destroy

**Presentation
TASK FORCE**



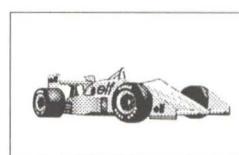
driving

**AC
BBO**



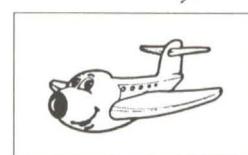
drwbalon

**Art
RiGHT**



elf

**Art
RiGHT**



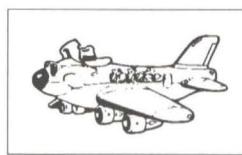
funplane

**creative collection
Butterfly**



handicap

**3G
GRAPHICS**



hatplane

**DIGITAL
ideen
archiv**



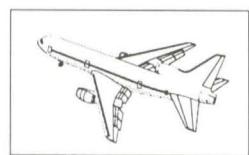
hotair1

Colorart
High quality art for business presentation and publishing



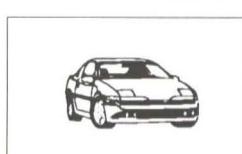
jet

**3G
GRAPHICS**



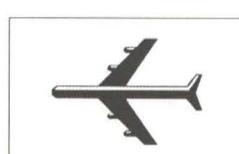
I-1011

**Art
RiGHT**



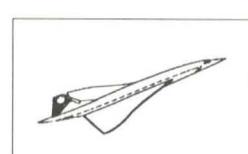
newcar

**3G
GRAPHICS**



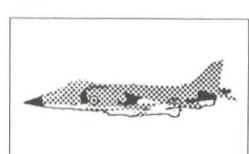
plane

Colorart
High quality art for business presentation and publishing



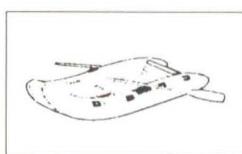
plane1

**HAL
Visual
Presentation**



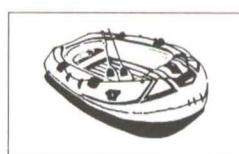
plane2

**HAL
Visual
Presentation**



raft1

**DIGITAL
ideen
archiv**



raft2

**DIGITAL
ideen
archiv**



sailboat

ClickArt



seatbelt

**Art
RiGHT**

TRANSPORTATION

COREL



sedan

ColorArt
High-quality artwork for business presentation and publishing



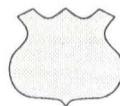
ship

MOONLIGHT ARTWORKS



sign1

HAL Visual Presentation



sign2

HAL Visual Presentation



sign3

HAL Visual Presentation



sign4

HAL Visual Presentation



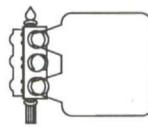
sign5

HAL Visual Presentation



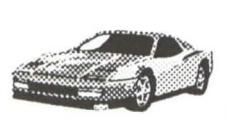
sign6

HAL Visual Presentation



signal

MCI



sprtcar1

IMAGE CLUB



sprtcar2

IMAGE CLUB



sub

Presentation TASK FORCE



taxi

3G GRAPHICS



traflits

creative collection
Butterfly



train

creative collection
Butterfly



truck

IMAGE CLUB

SYMBOLS

The following pages showcase Corel's Symbol Library - consisting of over 3000 black and white symbols. In contrast to the clipart found in the previous section, these symbols were created entirely at Corel and are simple-crafted characters designed for the exclusive use of CorelDRAW owners.

As a character, the symbols may be incorporated into text or manipulated as a graphic via node editing. With this flexibility, and with the number and variety of symbols available here, you'll find your fingers flipping to this section of the catalog time and time again.

For ease of use, the symbols are sorted into categories (as listed below). To access any group of symbols, select the text tool in your CorelDRAW program, move the cursor to the page, and click your left mouse button while depressing the shift key. On the right-hand side of your pop-up screen, you'll find a listing of the categories available. Select a category, pick a symbol and hit "ok". Now the symbol is yours to manipulate freely. More information on this process can be found in your CorelDRAW reference guide.

Have fun!

ANIMALSARCHITECTURE**ARROWS-OUTLINED**
 ARROWS-FILLED
 BALLOONSBANNERS&AWARDS**BORDERS**
 BORDERS-ORNAMENTALBOXES**
 BULLETS-CIRCLESBULLETS-RECTANGLES**BULLETS-TRIANGLES**
 COMPUTERSELECTRONICS**FLOORPLAN**
 FOODFURNITURE**HOLIDAYS**HOUSEHOLD ITEMS**HYGIENE**
 MUSICAL INSTRUMENTSNATURE**NAUTICAL FLAGS**
 SCIENCE&MEDECINESHAPES 2D**SHAPES 3D**
 SIGNS & SYMBOLSSPACE**
 SPORTS FIGURESSPORTS&HOBBIES**
 STARS-FILLEDSTARS-OUTLINED**
 TECHNOLOGYTOOLS & GARDENING**
 TRANSPORTATION
 WEATHER

SYMBOLS

Animals

									
001	002	003	004	005	006	007	008	009	010
									
011	012	013	014	015	016	017	018	019	020
									
021	022	023	024	025	026	027	028	029	030
									
031	032	033	034	035	036	037	038	039	040
									
041	042	043	044	045	046	047	048	049	050
									
051	052	053	054	055	056	057	058	059	060
									
061	062	063	064	065	066	067	068	069	070
									
071	072	073	074	075	076	077	078	079	080

SYMBOLS



081



082



083



084



085



086



087



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Architecture



001



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SYMBOLS

051	052	053	054	055	056	057	058	059	060
061	062	063	064	065	066	067	068	069	070
071	072	073	074	075	076	077	078	079	080
081	082	083	084	085	086	087	088	089	090
091	092	093	094	095	096	097	098	099	100
101	102	103	104	105	106	107	108	109	110

SYMBOLS

Arrows-Filled

001	002	003	004	005	006	007	008	009	010	
011	012	013	014	015	016	017	018	019	020	
021	022	023	024	025	026	027	028	029	030	
031	032	033	034	035	036	037	038	039	040	
041	042	043	044	045	046	047	048	049	050	
051	052	053	054	055	056	057	058	059	060	
061	062	063	064	065	066	067	068	069	070	
071	072	073	074	075	076	077	078	079	080	

Arrows-Outlined

001	002	003	004	005	006	007	008	009	010
011	012	013	014	015	016	017	018	019	020
021	022	023	024	025	026	027	028	029	030
031	032	033	034	035	036	037	038	039	040
041	042	043	044	045	046	047	048	049	050
051	052	053	054	055	056	057	058	059	060
061	062	063	064	065	066	067	068	069	070
071	072	073	074	075	076	077	078	079	080

SYMBOLS



081



082



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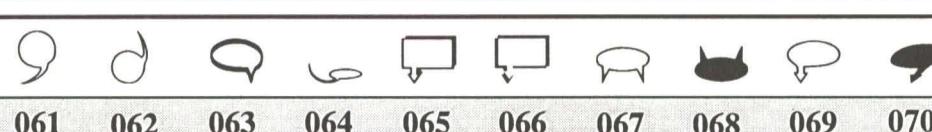
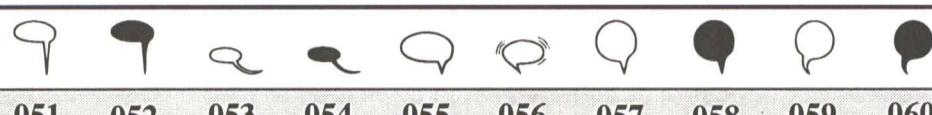
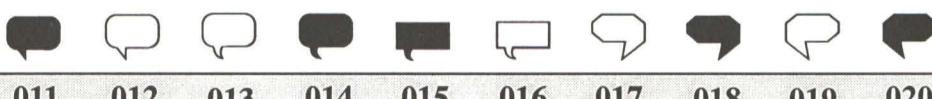
139



140

SYMBOLS

Balloons



SYMBOLS

081	082	083	084	085	086	087	088	089	090
091	092	093	094	095	096	097	098	099	100
101	102	103	104	105	106	107	108	109	110

Banners & Awards

001	002	003	004	005	006	007	008	009	010
011	012	013	014	015	016	017	018	019	020
021	022	023	024	025	026	027	028	029	030
031	032	033	034	035	036	037	038	039	040

Borders

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061	062	063	064	065	066	067	068	069	070
071	072	073	074	075	076	077	078	079	080

SYMBOLS



081 082 083 084 085 086 087 088 089 090

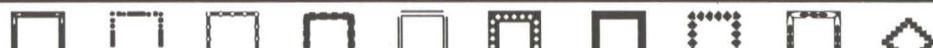


091 092 093 094 095 096 097 098 099 100



101 102 103 104 105 106 107 108 109 110

Borders-Ornamental



001 002 003 004 005 006 007 008 009 010



011 012 013 014 015 016 017 018 019 020



021 022 023 024 025 026 027 028 029 030



031 032 033 034 035 036 037 038 039 040

SYMBOLS

									
041	042	043	044	045	046	047	048	049	050

Boxes

									
001	002	003	004	005	006	007	008	009	010
									
011	012	013	014	015	016	017	018	019	020
									
021	022	023	024	025	026	027	028	029	030
									
031	032	033	034	035	036	037	038	039	040
									
041	042	043	044	045	046	047	048	049	050

SYMBOLS

051	052	053	054	055	056	057	058	059	060
061	062	063	064	065	066	067	068	069	070
		073	074	075	076	077	078	079	080
071	072	073	074	075	076	077	078	079	080

Bullets-Circles

001	002	003	004	005	006	007	008	009	010
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021	022	023	024	025	026	027	028	029	030
031	032	033	034	035	036	037	038	039	040

SYMBOLS



041 042 043 044 045 046 047 048 049 050



051 052 053 054 055 056 057 058 059 060



061 062 063 064 065 066 067 068 069 070



071 072 073 074 075 076 077 078 079 080



081 082 083 084 085 086 087 088 089 090



091 092 093 094 095 096 097 098 099 100



101 102 103 104 105 106 107 108 109 110



111 112 113 114 115 116 117 118 119 120

SYMBOLS



121	122	123	124	125	126	127	128	129	130
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131	132	133	134	135	136	137	138	139	140
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Bullets-Rectangles



001	002	003	004	005	006	007	008	009	010
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011	012	013	014	015	016	017	018	019	020
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021	022	023	024	025	026	027	028	029	030
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031	032	033	034	035	036	037	038	039	040
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041	042	043	044	045	046	047	048	049	050
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SYMBOLS

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051	052	053	054	055	056	057	058	059	060
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061	062	063	064	065	066	067	068	069	070
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071	072	073	074	075	076	077	078	079	080
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081	082	083	084	085	086	087	088	089	090
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091	092	093	094	095	096	097	098	099	100
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101	102	103	104	105	106	107	108	109	110
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111	112	113	114	115	116	117	118	119	120
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121	122	123	124	125	126	127	128	129	130
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SYMBOLS

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Bullets-Triangles



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SYMBOLS

061	062	063	064	065	066	067	068	069	070
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131	132	133	134	135	136	137	138	139	140

SYMBOLS

Computers

001	002	003	004	005	006	007	008	009	010
011	012	013	014	015	016	017	018	019	020
021	022	023	024	025	026	027	028	029	030
031	032	033	034	035	036	037	038	039	040
041	042	043	044	045	046	047	048	049	050

Electronics

001	002	003	004	005	006	007	008	009	010
011	012	013	014	015	016	017	018	019	020

SYMBOLS

021	022	023	024	025	026	027	028	029	030
031	032	033	034	035	036	037	038	039	040
041	042	043	044	045	046	047	048	049	050
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081	082	083	084	085	086	087	088	089	090
091	092	093	094	095	096	097	098	099	100

SYMBOLS

101	102	103	104	105	106	107	108	109	110
111	112	113	114	115	116	117	118	119	120
121	122	123	124	125	126	127	128	129	130
131	132	133	134	135	136	137	138	139	140
141	142	143	144	145	146	147	148	149	150

Floorplans

001	002	003	004	005	006	007	008	009	010
011	012	013	014	015	016	017	018	019	020

SYMBOLS

SYMBOLS

101	102	103	104	105	106	107	108	109	110

Food

001	002	003	004	005	006	007	008	009	010

011	012	013	014	015	016	017	018	019	020

021	022	023	024	025	026	027	028	029	030

031	032	033	034	035	036	037	038	039	040

041	042	043	044	045	046	047	048	049	050

051	052	053	054	055	056	057	058	059	060

SYMBOLS

061	062	063	064	065	066	067	068	069	070
071	072	073	074	075	076	077	078	079	080

Furniture

001	002	003	004	005	006	007	008	009	010
011	012	013	014	015	016	017	018	019	020
021	022	023	024	025	026	027	028	029	030
031	032	033	034	035	036	037	038	039	040
041	042	043	044	045	046	047	048	049	050

SYMBOLS

051	052	053	054	055	056	057	058	059	060
061	062	063	064	065	066	067	068	069	070

Holidays

001	002	003	004	005	006	007	008	009	010
011	012	013	014	015	016	017	018	019	020
021	022	023	024	025	026	027	028	029	030
031	032	033	034	035	036	037	038	039	040
041	042	043	044	045	046	047	048	049	050

SYMBOLS

051	052	053	054	055	056	057	058	059	060
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Household Items

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011	012	013	014	015	016	017	018	019	020

SYMBOLS

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SYMBOLS

Hygiene

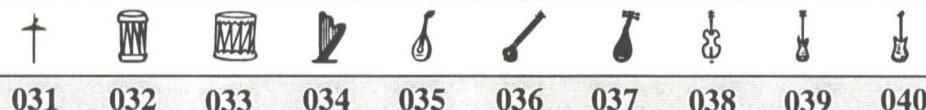
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SYMBOLS



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Musical Instruments



SYMBOLS

Nature

001	002	003	004	005	006	007	008	009	010
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SYMBOLS



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Nautical Flags



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SYMBOLS

Science & Medicine

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Shapes-2D

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SYMBOLS

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SYMBOLS

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Shapes 3D

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SYMBOLS

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SYMBOLS

Signs & Symbols

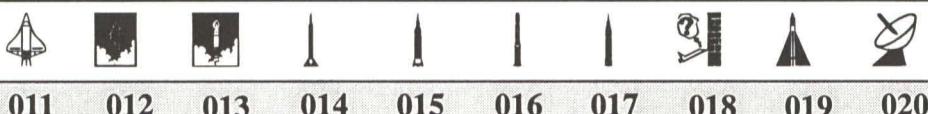
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SYMBOLS

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Space



SYMBOLS

Sports Figures

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SYMBOLS

Sports & Hobbies

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SYMBOLS

Stars-Filled

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SYMBOLS

									
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Stars-Outlined

									
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SYMBOLS

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Technology

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Tools & Gardening



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Transportation

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SYMBOLS

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SYMBOLS

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Weather

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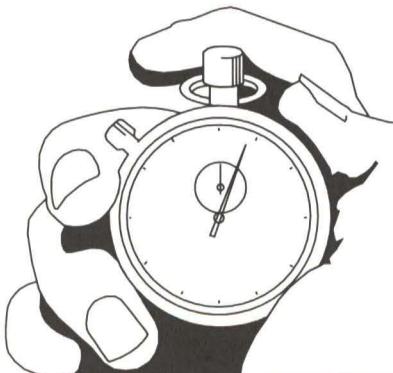
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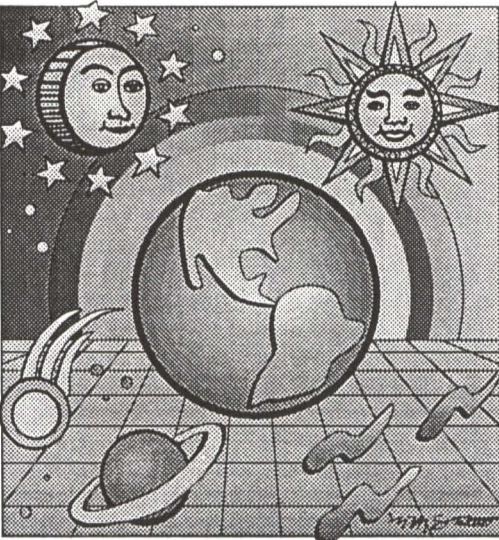
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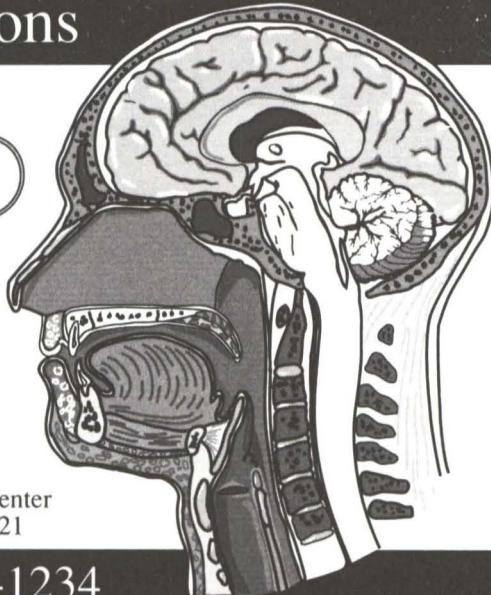
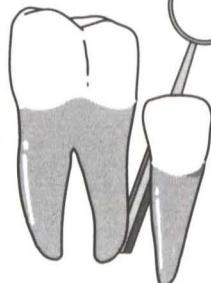
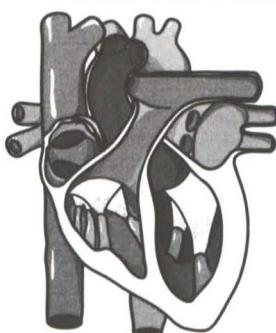
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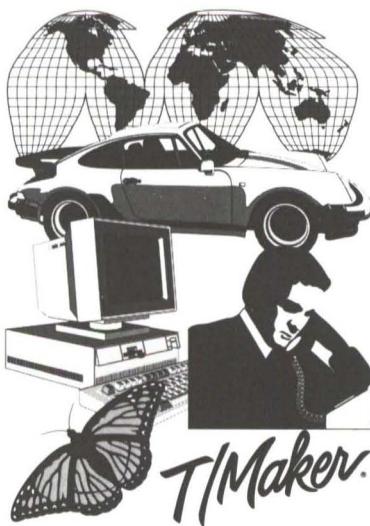


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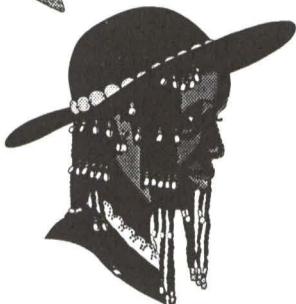
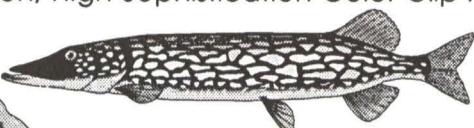
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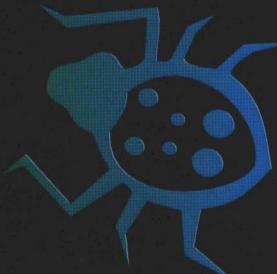
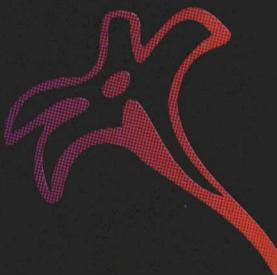
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Tel : (613)728-8200

Fax : (613)728-9790



\$1,000,000 *Everybody Wins!*

CORELDRAW WORLD DESIGN CONTEST

CorelDRAW is the world's leading graphics software, used in over 40 countries by over 200,000 people. To encourage the sharing of ideas between our international community of enthusiasts, Corel Systems Corp. has organized this \$1,000,000 World Design Contest, open to all registered CorelDRAW users around the globe!

Win

When you ENTER!

Enter and be awarded an outstanding prize package worth \$300! (Entries must meet minimum qualifying standards.)

- Prize package: CD-ROM of CorelDRAW's ArtShow '91; Corel coffee mug; mouse pad; key ring.
- Worldwide media exposure! Your entry is recorded on CD-ROM and distributed around the globe!
- You automatically become a member of the **Corel Creative Club**. You receive a club newsletter showing monthly entries and a club pin.

Win

MONTHLY CONTEST

Every month you can enter and win in each of nine categories (from Sept. '91 to April '92). All first place winners are automatically entered into the Annual World Contest.

9 First Prizes: value \$1839 each

- **Corel CD-ROM package:** CD-ROM drive: LK-MC 500 Series from **Panasonic**; CorelDRIVER PC Interface Kit; CorelDRAW on CD-ROM including thousands of dollars worth of extra clipart images.

Round trip paid to Ottawa, Canada, for the Gala Awards Night.

9 Second Prizes: value \$795 each

- **Ventura Publisher** for Windows 3.0

9 Third Prizes: value \$495 each

- **PerFORM PRO** for Windows 3.0 by Delrina Technology Inc.

9 Bonus Prizes
Graphics **Vantage** Windows accelerator board from **ATI**.

Win

ANNUAL WORLD CONTEST

All first place monthly contest winners in each of the nine categories are eligible to win these fabulous prize packages:

9 Grand Prizes: value \$15,000 each

- Contest Trophy; Complete PC System —

SYSTEM: * Preferred 433 * 486 PC System and new generation video card from **CSS Laboratories**;

MONITOR: Color VGA monitor from **AAMAZING Technologies**;

LASER PRINTER: Silentwriter2, Model 90 from **NEC Technologies**

SCANNER: HP ScanJet IIC from **Hewlett-Packard**

HARD DRIVE: **SEAGATE** ST1239A Swift Series hard drives from **Tenex Data Corporation**

9 Second Prizes: value \$5000 each

- Contest Plaque; Software Library; Graphics **ULTRA** Windows accelerator board from **ATI**; IS60 Image Scanner from **Ricoh Imaging**

9 Third Prizes: value \$2000 each

- Contest Plaque; Software Library.

9 Awards of Excellence: value \$1200 each

- Software Library.

GOLD for BEST OF SHOW!

The best overall entry of the 9 Grand Prize winners in the Annual World Contest wins a 1 kilogram GOLD BAR!

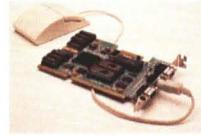
* ALL DOLLAR AMOUNTS IN U.S. FUNDS. COREL RESERVES THE RIGHT TO MODIFY CATEGORIES.



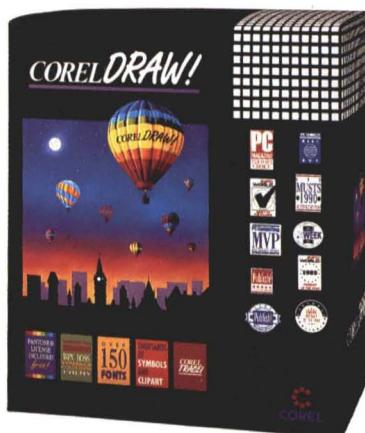
CSS LABORATORIES



NEC TECHNOLOGIES



ATI TECHNOLOGIES



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CSS

NEC RICOH

Panasonic
Office Automation

DELRINA

hp **HEWLETT**
PACKARD

ATI
TECHNOLOGIES

AAMAZING

Seagate

BETACORP

Ventura Software

Lotus

Microsoft

COREL

Everybody Wins

Hardware



SPONSORS & PRIZES

(SEE FRONT FOR PRIZE PACKAGE BREAKDOWNS)

ATI Technologies

72 Graphics **Vantage** Windows Accelerator Boards
9 Graphics **ULTRA** Windows Accelerator Boards

CSS Laboratories:

9 "Preferred 433" 486 PC Systems and
new generation video cards



PANASONIC

72 LK-MC 500 Series CD-ROM Drives



NEC Technologies

9 Silentwriter2 Model 90 laser printers



RICOH IMAGING

9 IS60 Image Scanners

AAMAZING

AAMAZING Technologies

9 AAMAZING 1024x768 Color VGA Monitors



HEWLETT-PACKARD

9 HP ScanJet IIC Scanners



TENEX AND SEAGATE

9 SEAGATE ST1239A Swift Series hard drives
from Tenex Data Corporation*

Software

Ventura Software

VENTURA SOFTWARE

72 packages of Ventura Publisher



DELRINA TECHNOLOGIES INC.

72 packages of PerFORM PRO



MICROSOFT CORPORATION

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18 packages of Microsoft Word
9 packages of PowerPoint

Lotus

LOTUS CORPORATION

9 packages of Ami Pro

BETACORP

BETACORP

27 1st Canadian Shareware CD-ROM disks

* Seagate and the Seagate logo are registered trademarks of Seagate Technology Inc.

This contest is not valid where prohibited by law.

NAME: _____

ADDRESS: _____

CITY: _____

PROVINCE/STATE: _____

COUNTRY: _____

POSTAL CODE: _____

TELEPHONE: _____

FAX: _____

CATEGORY (see front for listing): _____

MONTH OF ENTRY: _____

IN-HOUSE

READ CAREFULLY: I hereby warrant that I have read and fully understand the above listed rules and have the full right and authority by way of ownership, partnership, participation or owner's full permission to enter the enclosed sample(s) in the CorelDRAW World Design Contest. Corel has my express written permission to publish, use or sell the enclosed artwork for any purposes, without payment of fee or royalty. Corel has the right to substitute prizes of an equal or greater value. I am a registered CorelDRAW user. The enclosed is my own original work, executed in at least 60% CorelDRAW.

CHECKLIST

1. Completed and signed entry form (or photocopy). One per entry.
2. Short description of execution of design. 3. Diskette(s). 4. Printed sample(s).

SIGNATURE: _____

DATE: _____

MAIL TO: Corel Systems Corporation, World Design Contest, 1600 Carling Ave. Ottawa, Ontario, Canada K1Z 8R7

Tel: (613) 728-8200 ext. 1609 / Fax: (613) 728-2891

COREL MAGAZINE

Editorial contact:

Ellen Adams 512-459-5800

New Magazine Targets Corel Systems Product Users

November 18, 1991, Austin, TX— Adams Publications, Austin, TX-based computer publication publisher, has just announced a magazine to meet the needs of the Corel Systems products user. *Corel Magazine* will help readers get the most out of their computer systems. The new, four-color, standard-size glossy will offer clear, concise material that can help readers better understand and utilize CorelDraw, Corel's award-winning graphics software program and Corel's various optical technology products.

Adams Publications will produce the independent monthly magazine. Ellen Adams, publisher and editorial director, has helmed a variety of magazines in the computer industry, including *MicroCAD News*, the premiere publication for Computer-Aided Design and *NetWare Solutions*, the magazine for the Novell System Manager. "Corel Magazine is distinctly tailored for the Corel Systems user. It's not a *Pixel*, a *Computer Pictures* or *Computer Graphics World*," Adams says. "We'll feature real users in genuine, down-to-earth applications. We will offer practical, job-related advice, with in-depth coverage of the financial and business operations of Corel Systems and third-party companies."

The magazine will cover both Corel Systems products and third-party goods and services. Robb Jameson serves as advertising director. Former advertising director for Data Base Publications and veteran of The Texas Monthly Press, Jameson brings a wealth of expertise to the project. "Corel's growth rate has been phenomenal. And, as the company's profits increase, so too does the number of users who need to understand the

—More—

Adams Publications, Page 2

product line," Jameson says. "We can help fill the gaps in their graphics education."

Each issue will contain a number of features covering effective input and elegant output, platform choice, backup strategies, connectivity, tutorials, and tips. User profiles, general technology and a question-and-answer article series will supplement regular columns authored by top names in the field and a special, up-to-date offering of Corel and third-party corporate and industry news. New products will be included in Marketwatch, a special section devoted to announcements of new products in the Corel and Corel-compatible marketplace.

The magazine will debut in March 1992.

For more information, contact Ellen Adams, Adams Publications, 719 Park Blvd., Austin, TX 78751; phone/FAX 512-459-5800.

###

CORELDRAW!
REGISTERED
USERS SPECIAL

OVER \$5000 IN VALUE!

BLOCKBUSTER

CD-ROM
BUNDLE OFFER
\$595*

The time is now to catch the Corel CD-ROM wave! With this unbeatable upgrade offer* there's no better time to move up to the convenience and flexibility of CD-ROM. CorelDRAW 2.01 on CD-ROM is here with all of CorelDRAW's incredible features as well as over 10,000 award-winning clipart images and symbols in both .CDR and .EPS file formats. Replacing over 500 floppy disks, this CD-ROM saves you time, money, and improves your productivity. Installation is a breeze!

BUNDLE INCLUDES:

1 CorelDRAW 2.01 on CD-ROM

Now even more power, versatility and new features are yours with CorelDRAW on CD-ROM. Over 10,000 clipart images and symbols are included from the libraries of the leading clipart companies in the industry. All this clipart is uncompressed so that it can load up to 10 times faster than the diskette version. Also added are 50 new fonts taking the total to over 200! The entire program can run directly from CD-ROM saving you valuable space on your hard drive.

- **TOTEM GRAPHICS** - 1248 full color, sophisticated images from 13 different subject areas: business, sports, holidays, birds, animals, fish, food, flowers, insects, nautical, transportation, tools and hardware, women.
- **ARTRIGHT IMAGE PORTFOLIOS** - 3500 award-winning realistic, thematic images: people, all the flags of the world plus individual state and historical flags, space, finance, machinery, medical, technology, arts/entertainment, background/seasonal, borders, animals and more.
"Incredibly slick stylized images with incredible attention to detail."
PC Magazine
- **MAPART from MICROMAPS** - 140 highly detailed maps: states, countries, continents, and the world at a glance.
- **ONE MILE UP** - 1300 military and government based images, symbols, insignias, etc., including the Presidential Seal.
- **LIFEART** - 330 detailed medical clipart images from TechPool Studios.
- **IMAGE CLUB** - over 1000 fun graphics and 50 top-quality fonts.

PLUS!

- COREL's own 250 full color clipcharts for business presentations.
- CorelDRAW in 5 languages: English, French, Dutch, Spanish, and German, all on one disk.
- New on-line help and free demo program.
- CorelDRAW in both OS/2 and Windows versions.

2 High Performance Panasonic CD-ROM Drive

The Panasonic CD-ROM drive is available as an internal or external model and is compatible with any industry standard CD-ROM media format. Key features are: fast access time, embedded SCSI interface, head-phone output jacks, and adjustable volume control.

3 CorelDRIVER / CD-ROM Interface Kit

CorelDRIVER for CD-ROM is the latest addition to Corel's industry-leading family of optical storage interface products. Also included is Corel CD-AUDIO (to play your musical CDs) and other useful utilities.



 **COREL**
TEL : (716) 423-8200
FAX : (613) 728-9790

Enter now and win monthly in the CorelDRAW \$1,000,000 World Design Contest!

By Mail

Mail this completed order form and payment to Corel Systems Corporation,
1600 Carling Ave., Ottawa, ON, CANADA K1Z 8R7, (613) 728-8200 (8:30-5:00 EST)

By Fax

Fax us your credit card order at **(613)761-9176** (24 hours a day)

Shipping Info

Shipment is by courier only. Please provide a street address (no P.O. boxes) for delivery.
Allow 4-6 weeks for upgrade delivery (or before placing a follow-up call)

*Fill in info.
on right or,
glue or tape
business
card to form*

REG. USER'S FIRST NAME	INIT.	REG. USER'S LAST NAME
<input type="text"/>	<input type="text"/>	<input type="text"/>
COMPANY		
<input type="text"/>		
STREET ADDRESS		CITY
<input type="text"/>	<input type="text"/>	<input type="text"/>
STATE/PROV	ZIP/POSTAL CODE	DAYTIME PHONE
<input type="text"/>	<input type="text"/>	<input type="text"/> <input type="text"/>

Order Info

(Registered
Users only.
Limited time
offer, subject
to change
without notice)

Corel CD-ROM Bundle	CorelDRAW 2.01 on CD-ROM Upgrade
<p>INCLUDES:</p> <ul style="list-style-type: none"> • Panasonic CD-ROM Drive model CR-501 w/Audio • CorelDRIVER! SCSI Interface Kit • CorelDRAW 2.01 on CD-ROM <p><input type="checkbox"/> Internal Drive – PC Bus \$595 US \$685 Cdn</p> <p><input type="checkbox"/> External Drive – PC Bus \$695 US \$800 Cdn</p> <p><input type="checkbox"/> External Drive – MCA Bus \$795 US \$915 Cdn</p>	<p>INCLUDES:</p> <ul style="list-style-type: none"> • CorelDRAW 2.01 on CD-ROM • Thousands of dollars extra value <p><input type="checkbox"/> CorelDRAW on CD-ROM Upgrade \$100 US \$115 Cdn</p>

Subtotal:

Shipping & handling (\$20 United States, \$10 Canada):

Canadians, please add 7% GST (on subtotal and s&h):

Ontario residents, add 8% provincial tax (on subtotal and s&h):

Grand Total (U.S. customers remit in U.S. currency):

Payment Info

Enclosed is a check or money order. Please make your check payable to Corel Systems Corp.

Please charge the amount to my credit card. Check one of the following:

VISA MasterCard American Express

CARD NUMBER

EXPIRY DATE

NAME ON CREDIT CARD (PLEASE PRINT)

SIGNATURE

COREL

ARTSHOW '91

1991



Corel ArtShow '91 CD-ROM and 120 page full-color coffee table book feature an exciting selection of high quality designs that were entered into the second annual CorelDRAW International Design Contest. Over 850 CorelDRAW designs are easily accessible using our unique graphical user interface, utilizing Asymetrix Toolbook. Each design is fully editable due to Corel ArtShow's integrated operation with CorelDRAW. As an added bonus another 350 images from the ArtShow '90 CD-ROM are stored on this CD-ROM for you to use within CorelDRAW. Learn and use many of the techniques of the world's best CorelDRAW experts, and draw inspiration for this year's \$1,000,000 World Design Contest. Combining online MIDI music, artwork, and user interface, Corel ArtShow '91 is an exciting new multimedia experience.

only
\$295

INCLUDES CD-ROM DISK
AND 120 PAGE FULL-COLOR
COFFEE TABLE BOOK

Catch the Corel CD-ROM Wave!

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CORELDRAW!

on CD-ROM

**SUPER
VALUE!**

CorelDRAW is the world's finest graphics program. To date it has won 40 international awards for its incredible type control, superb drawing power, stunning special effects, and ease-of-use. Creating eye-catching newsletters, advertisements, presentations, and illustrations is fast and fun with CorelDRAW. Our users love it! Now you can experience the full features of CorelDRAW 2.01 and much,

much more with CorelDRAW on CD-ROM. The time is now to move up to the unrivalled power and tremendous value that CD-ROM provides. Over \$5000 worth of extra clipart is yours on a single disk, at a fraction of the cost. And each CD-ROM replaces over 500 floppy disks, so your productivity increases through ease of handling and installation. Save time and money. Catch the Corel CD-ROM wave today!

FEATURES OF CORELDRAW ON CD-ROM INCLUDE:

NEW 10,000+ CLIPART & SYMBOLS

Totem Graphics: over 1200 highly realistic, categorized images

ArtRight Image Portfolios: 3500 award-winning realistic images

MapArt from MicroMaps: 500 detailed country and state maps

One Mile Up: 1000 military and government based graphics

LifeArt: 250 medical clipart images from TechPool Studios

Image Club: 1000 fun designs and 50 additional fonts

ALL CLIPART IS IN BOTH .CDR AND .EPS FILE FORMATS

NEW 200 FONTS

over 200 fonts including 50 new fonts.

NEW MULTILINGUAL VERSIONS

English, German, Dutch, French, & Spanish all on one disk.

NEW MULTIPLATFORM

CorelDRAW in both Windows and OS/2 versions.

NEW ON-LINE HELP

Plus hot-line service and a free demo program.

NEW FAST AND EASY INSTALLATION

All clipart is uncompressed so loading can be up to 10 times faster than the diskette version. Run the entire program directly from CD-ROM to save you valuable space on your hard drive.

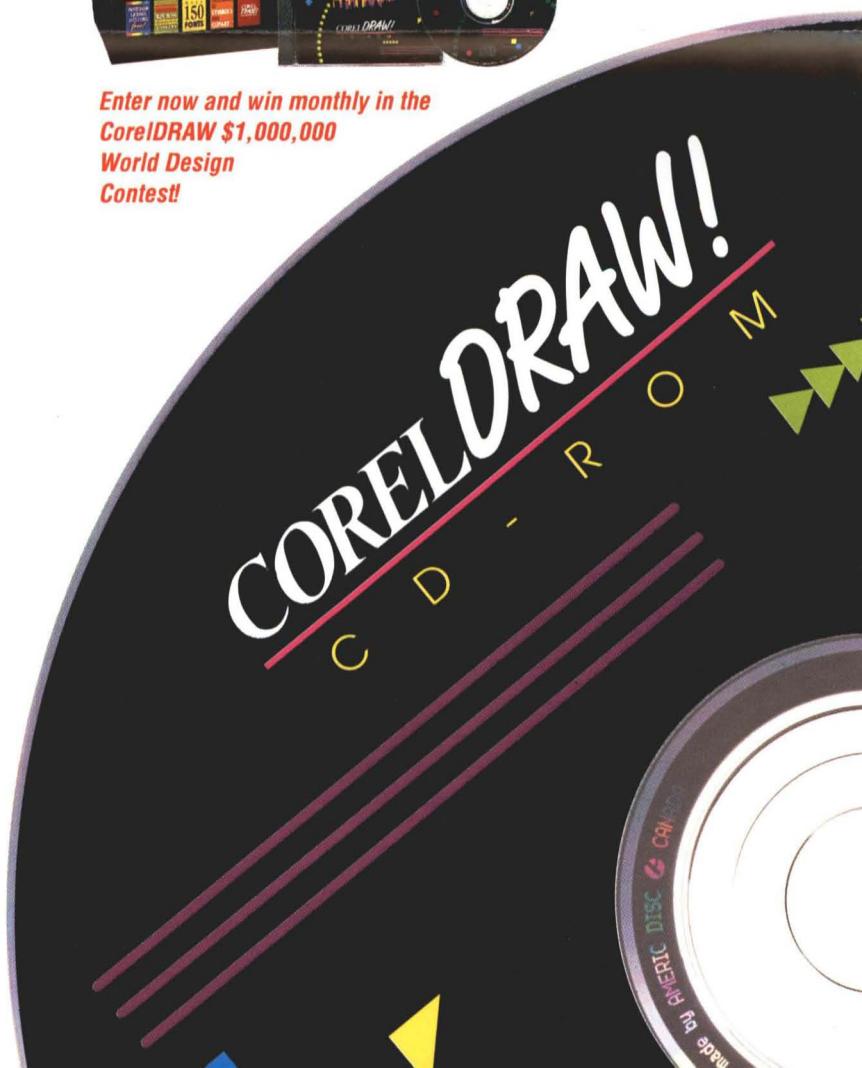
NEW BLOCKBUSTER PACK!

Complete "Ready to Go" CD-ROM bundle

- CorelDRAW 2.01 on CD-ROM
- Panasonic CD-ROM Drive
- CD-ROM Interface Kit



*Enter now and win monthly in the
CorelDRAW \$1,000,000
World Design
Contest!*



FEATURE SUMMARY

TYPE SELECTION AND CONTROL

200+ Professional Fonts & Styles. Including 35 that closely match standard PostScript printer typefaces.
See Exact Fonts on Screen, even when type is skewed, rotated, or magnified - see exactly what will print.
See Typefaces Before You Select. Character shapes are visible on screen as you scroll through the font list.
Fit Text to a Curve. Text can easily be snapped to a curve such as a circle, a rectangle, or even other text.
Paragraph and Multi-Column Text capability lets you manipulate large amounts of text for single page layouts.
Extract Text for translations, captions, etc.
Merge Text for personalized certificates, awards, etc.
Create Your Own Fonts using CorelDRAW's tools.
Export Fonts to Adobe Type 1 for use with Adobe Type Manager (ATM) and PostScript compatible applications.

SUPERB DRAWING POWER

Smooth Bézier Curves. Choose from point-to-point or freehand drawing methods.
Powerful Curve Editing Tools save you time.
Calligraphic Pen Shapes give your curves a human touch with custom pen shapes and angles.
Envelope (warp) function lets you stretch your text or objects any way you like.
Perspective lets you take any two dimensional graphic and place it on a three dimensional plane.
Extrusion gives depth to text and graphics.
Blend tool lets you create subtle shading effects and transform one object into another.
Clip Holes in Objects for masking or transparency.
Arrowheads. Choose from over 80 or create your own.
Line Styles. Choose from 16 dashed/dotted styles.



AMAZING COLOR AND FILLS

Free Pantone* License so you can select from the industry standard for print colors.
Custom Colors can be blended with RGB, CMYK and HSB color models.
On-screen Palette for quick color selection.
Bitmap and Vector Fills. Choose from dozens of patterns or create your own easily.

SPECTACULAR OUTPUT

Print to any Windows Supported Printer, including high-resolution PostScript imagesetters.
Amazing LaserJet and PaintJet Output. All of the features listed produce output rivalling PostScript printers.
Output to Slidemakers and VideoShow 180 via Windows drivers for beautiful presentations.
On-screen Slideshow using Mosaic, a visual file manager.

OUTSTANDING VALUE

CorelDRAW comes complete with the following:

- CorelDRAW Illustration Software
- MOSAIC Visual File Manager
- CorelTRACE Color/B&W Bitmap Tracing Software
- WFNBOSS Typeface Conversion Software
- Over 200 Professional Fonts
- Over 10,000 Clipart Images and Symbols
- First Look Videocassette (one hour overview)
- Tutorial Manual - 8 exercises
- Comprehensive User Manuals
- Typeface Guide, Type Gauge, Color Chart
- Unlimited Free Hotline Support
- Free User Newsletter



COMPREHENSIVE CONNECTIVITY

IMPORT

- PCX PC Paintbrush Color/B&W
- TIFF Scanned Color/B&W Bitmap
- BMP Windows Bitmap
- DXF AutoCAD
- AI Adobe Illustrator (Mac/PC)
- GEM Gem Artline, Graph & Draw
- PIC Lotus 1-2-3 Graph
- HPGL(PLT) Plotter File
- CGM Harvard, Freelance, A&L, Designer, etc.
- PIF(GDF) IBM Mainframe
- PICT(PCT) PICT1 B&W & PICT2 Color (Mac)
- TXT ASCII Text



EXPORT

- EPS Encapsulated PostScript
- WMF Windows Metafile
- PCX PC Paintbrush
- TIFF Bitmap
- DXF AutoCAD (outlines only)
- CGM Harvard, Ventura, etc.
- PIF(GDF) IBM Mainframes
- GEM Ventura, Perform, etc.
- HPGL(PLT) Plotter file (outlines only)
- AI Adobe Illustrator (Mac/PC)
- PICT PICT2 Color (Mac)
- SCOLD(SCD) Slide
- VideoShow(PIC) General Parametrics
- WPG WordPerfect Graphic
- WFN CorelDRAW font & symbol file



COREL SYSTEMS CORPORATION
1600 Carling Avenue., Ottawa, ON, CANADA K1Z 8R7

Tel. (716) 423-8200 (8:30 - 5:00 EST)
Fax (613) 761-9176 (24 hours)

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Printed in Canada

1. One who creates works of art.

artist (är'ēt) n.

ASSOCIATION of **C**OREL **A**RTISTS & **D**ESIGNERS
2912 3rd Street, Suite 4 • Santa Monica, CA 90405

AFFIX
POSTAGE
HERE

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2912 3rd Street, Suite 4 • Santa Monica, CA 90405

ASSOCIATION of COREL ARTISTS & DESIGNERS

What is **CORELDRAW!**?

CORELDRAW! is a popular computer based illustration tool used by artists and designers to create fantastic and exciting art.

What is the association of Corel Artists and Designers?

The association is a non-profit association of artists and designers currently using or interested in **CORELDRAW!**

What is the purpose of the association?

Its purpose is to promote the use of electronic composition and imaging in the art and publishing communities by the use of the **CORELDRAW!** computer software program.

What does the association do?

The association provides various means of education and support through the formation of local chapters and the publication and distribution of a monthly newsletter. **ACAD** also sponsors contests and promotions based on **CORELDRAW!**

Who owns the association?

As a non-profit organization, collectively, the members do.

Must I be a professional artist to become a member?

Absolutely not. Don't let the name of the association deceive you. Everyone using **CORELDRAW!** is an artist or designer in one way or another. Members can be traditional artists or designers or desktop publishers using **CORELDRAW!** You can even be a novice who simply likes to doodle on the computer.

How can the traditional artist or designer benefit from the association?

The traditional artist and designer expands to new horizons by discovering the power of a new art form which unleashes hidden talents never before dreamed of. He/she learns tips and tricks about the program from the desktop publishers who are often more trained in the use of the equipment than is the traditional artist or designer. The 1991 *Corel International Design Competition* displayed remarkable work produced by traditional artists new to computer art.

How can the desktop publisher benefit from the association?

The desktop publisher benefits by learning design and drawing techniques from the traditional artist or designer. He/she will learn how to become more creative.

In addition, the entry-level member learns from both.

That's the beauty of this association, which is the only one of its kind. Through a network of members everyone shares in the knowledge of others.

Who runs the association?

The members, through their elected officers, run the association. The association has a Board of Directors elected by the members.

I don't know the first thing about computers.

Can I learn to create art on a computer?

It's not necessary to be a "computer person" to learn and use **CORELDRAW!** Instead of a traditional pen and paper, one uses an electronic pen and paper. The results are immediately displayed on a video monitor. The time it takes to create fine art, commercial illustrations, technical drawings, and even cartoons is dramatically reduced. Colors, fills, line thicknesses, and even complex shading and airbrush effects are accomplished in seconds.

Members of the association have turned out fabulous art without ever knowing the first thing about computers. Some of this art was recently displayed in the *National Art Gallery of Canada*!

Why should I join the association?

If you do any kind of art, illustration, or publishing, it makes sense to find out all you can about new tools and techniques that will help make your job and craft that much easier. **CORELDRAW!** is actually a set of those tools. And **ACAD** can help you learn more about, and expand your horizons with **CORELDRAW!**

Send for your free info pack today!

DETACH HERE, AFFIX POSTAGE AND DROP IN MAIL FOR FREE INFORMATION PACK

YES! I'd like to know more about the ASSOCIATION of COREL ARTISTS & DESIGNERS. Send me my free info pack!

NAME _____

(PLEASE PRINT)

COMPANY _____

ADDRESS _____

CITY _____

STATE _____ ZIP _____

DO YOU CURRENTLY USE COREL DRAW? _____

WHAT VERSION? _____

HOW DID YOU HEAR ABOUT THE ASSOCIATION? _____